



STANDARD

The entity should use templates developed for IT procurement, which are specific to the type of procurement, i.e., hardware or software. Entities should examine the feasibility and desirability of using cooperative contracts if they meet the entity's needs and procurement rules. The procurement professional must take the highly technical information inherent in IT procurements and communicate it clearly and effectively in solicitations, negotiations, contracts, and during implementation.

Definition

Hardware refers to the physical components of a computer and related devices.

Element 1: Procurement should use solicitation templates specifically developed for the procurement of IT hardware. These templates must include language to safeguard the ownership and security of data, records, and other information stored on the hardware from contract award through disposal of the hardware, while guiding the parties to a mutually acceptable contract.

Solicitation templates for hardware procurement must be updated regularly to stay current with the rapid change of technology and should:

- Specify maintenance and support expectations, e.g., service response time, escalation processes and procedures.
- Specify special insurance requirements, e.g., cyber liability.
- Specify data storage requirements and frequency of updates when hardware includes software.
- Specify agency-specific security and confidentiality requirements, if applicable, e.g., hard drive removal so sensitive information is kept by the entity.
- Specify delivery and acceptance requirements.
- Specify required security clearances, e.g., IRS Publication 1075 contractor background check requirements.
- Specify the length of the award.
- Include a pre-proposal conference, when appropriate, to provide suppliers with the opportunity to ask questions.
- Require the supplier's terms and conditions in the response so the entity is aware up front of conflicting terms and conditions.
- Require that supplier's Service Level Agreements (SLA) be listed and detailed.
- Require supplier's implementation, training, and transition plans.
- Require that suppliers include cost discounts, e.g., trade-in, conversion, if applicable.



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Element 2: When procuring hardware, the procurement professional must know how the hardware will integrate with software.

This practice focuses on the procurement of hardware; however, hardware and software are often interconnected. Without software, computer hardware would have no function. For example, for the Macintosh platform, the software is integrated with the hardware, since both are developed by Apple. This differs from the Windows platform, in which Microsoft develops the software, but many different manufacturers produce the hardware. Without the creation of hardware to perform tasks directed by software via the central processing unit, software would be useless.

Element 3: When procuring hardware, decisions made during the planning phase by the procurement professional, Information Technology Department, end user, and other entity departments determine the solicitation requirements.

The stakeholders, i.e., end users, IT, procurement, must discuss the purpose of the procurement and determine requirements and desired outcomes, for example:

- Replacing existing items, e.g., obsolescence, repairs no longer cost effective.
- Addressing hardware that is at the end of its useful life.
- Adding capacity, new functionality, or improving unsatisfactory hardware.
- Updating to changing technology environments or platforms (this may be an opportunity for the entity or to keep/become current with modern technology).
- Identifying and planning for hardware/software vulnerabilities.
- Sustainability, i.e., environmental, social, economic.

The type of hardware selected will depend on factors such as:

- Timing.
 - Plan for obsolescence
 - Availability of hardware supply and staffing
 - Lead time for entity and supplier for delivery, installation, and training
 - Integration with software
 - The anticipated lifespan of the hardware and warranty
 - Storage and staging requirements for large scale deployments
 - Proof of concept (POC), if applicable (could add significant cost to the entity)
 - Pilot programs
 - Demonstrations
- Cost factors.
 - Whether a consultant is needed, e.g., configuration, design, installation
 - Purchase price, including installation and training
 - Maintenance, support, upgrades, warranty, compatibility, security
- Peripherals, e.g. keyboards, Uninterrupted Power Supply (UPS), monitors, mice, stands, printers.
- End user equipment, e.g., workstation, laptop, desktop, tablets, desktop printer.
- Ancillary computer devices, e.g., multi-function copiers/printers, cellular devices.

Decisions about lease versus buy are dependent on the entity's laws and policies on leasing. Lease options may include:

- Lease.
- Lease to own.
- Lease with warranties.
- Hardware upgrades or technology updates.

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Element 4: Entities should consider the risks and rewards of alternative procurement strategies to meet the requirements.

Cooperatives and piggybacks, sole source, and General Services Administration (GSA) procurements are used as alternative strategies to an entity issuing their own solicitation and should be fully evaluated before use. Cooperatives and piggybacks can serve as a valuable procurement tool for hardware procurements as they do for non-technology related purchases.

Please refer to the Public Procurement Practice on Information Technology (IT) Procurement Series — No. 2, Element 5, for more information.

Element 5: A full understanding of the procurement process and post award processes is needed to appropriately evaluate and negotiate an IT contract. Procurement, Finance, IT, Legal, and other stakeholders must work together to ensure a clear and concise contract, sometimes known as an agreement, that follows the hardware through its lifecycle.

Evaluation

The evaluation committee must include members with sufficient technical knowledge and/or the ability to evaluate descriptive literature. Descriptive literature may contain technical terms with the salient characteristics of the product offered, e.g., illustrations, brochures, technical data sheets. If technical expertise does not exist inhouse, the entity should consider a consultant, other experts, or partner entity.

Negotiation

Prior to entering negotiations, procurement professionals should develop a plan or strategy detailing:

- Embedded terms and conditions, e.g., hyperlinks.
- All terms that are separate from the terms and conditions of the contract, e.g., pop-up terms and conditions.
- Warranties.
- Future costs, e.g., future software and hardware upgrades, including maintenance and support of any upgrades, cap on maintenance renewal costs.
- Implementation and training.
- Schedules and milestone payments.
- Support and maintenance agreements.

The contract should incorporate the total cost of ownership, liability, security, agreements, clauses, and exhibits that cover the entire life cycle, risks, and support and maintenance plan.



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Element 6: When procuring hardware, the procurement professional must always consider device disposal and control of data.

The procurement professional must plan for end of life, e.g., what must be done with data on the existing hardware and how to secure and maintain data during an upgrade or transfer to a new supplier. Considerations include:

- Defining end of life, e.g., Technology Replacement Program (TRP).
 - “End-of-life” (EOL) is a term used with respect to a product supplied to customers that indicates the product is at the end of its useful life (from the supplier’s point of view) and a supplier has stopped selling or supporting it.
 - TRP outlines a strategic approach to technology replacement. All technology has a set lifecycle. Planning for the EOL minimizes damages from system failures.
- Device disposal/recycle for either current hardware or new purchases e.g., recycle, trade-in, selling via auction.
- Possible donation to charities/non-profits.
- Sustainability, i.e., environmental, social, economic.
- Security data on drives, e.g., personally identifiable information security.
- Use of sanitization, the process of permanently removing every trace of data from a storage device.

Background

Like most IT procurements, the procurement of hardware is typically a complex process that involves risk and can seem overwhelming. Proper planning; policy; procedural adjustments, e.g., proof of concept; the market research process --research, analysis, and intelligence; and the guidance described in this public procurement practice are designed to support procurement professionals when they procure hardware. Though typically not as complex nor as challenging as software procurement, hardware procurement requires flexibility and creativity. The procurement professional must be knowledgeable of the market, suppliers, and best practices. Further, the procurement professional must effectively work with a cross-disciplinary team consisting of clients, Legal and Information Technology Departments, suppliers, etc., to conduct an effective and timely hardware procurement process.