# Lease vs Purchase Guideline

for Information Technology (IT) Hardware

by the GSA IT Hardware Category Team

9/2/2015

Guidelines for making the lease versus purchase decision to be used by buyers in evaluating cost alternatives

## Section

<table>
<thead>
<tr>
<th>Section</th>
<th>Page #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Making the decision on Leasing vs Purchasing (Pros and Cons)</td>
<td>2</td>
</tr>
<tr>
<td>Total Cost of Ownership (TCO) Analysis</td>
<td>7</td>
</tr>
<tr>
<td>Leasing strategies</td>
<td>9</td>
</tr>
<tr>
<td>Leasing specific types of equipment</td>
<td>12</td>
</tr>
<tr>
<td>Appendix - Available Tools</td>
<td>15</td>
</tr>
<tr>
<td>Vendor Selection Checklist</td>
<td>14</td>
</tr>
<tr>
<td>Lease contract negotiation checklist</td>
<td>15</td>
</tr>
<tr>
<td>Current acquisition vehicles that support leasing</td>
<td>17</td>
</tr>
<tr>
<td>DOI Lease vs Purchase cost analysis tool</td>
<td>18</td>
</tr>
</tbody>
</table>
1. Introduction

The rate of technology change is increasing, with an emphasis on client/server technology, faster system development, and shorter life cycles. This has led to spiraling information technology (IT) budgets, driving the need for a re-evaluation of IT management issues. Organizations must find new ways to accommodate technological change. Leasing has recently emerged as a feasible, cost-effective alternative to purchasing equipment, particularly in the desktop and laptop areas. The decision on whether to lease or purchase equipment must be made by:

- Examining the IT management processes at the agency or organization
- Determining agency needs regarding IT
- Conducting a cost-benefit analysis of the leasing and purchasing alternatives

If done in the right way for the right reasons, leasing can be an efficient and cost-effective alternative to purchasing. If handled incorrectly, leasing can be more expensive and harder to manage than an outright purchase.

What is Leasing? According to Webster’s Law Dictionary, leasing is defined as “a contract by which an owner of property conveys exclusive possession, control, use, or enjoyment of it for a specified rent and a specified term after which the property reverts to the owner.” For practical purposes, leasing can be broken down into two types: a capital lease (lease to ownership) and an operating lease (lease with an option-to-own). In the commercial world, the Financial Accounting Standards Board classifies a lease as a capital lease if it meets one of these four criteria: (1) The lease transfers ownership of the property to the lessee by the end-of-the-lease term. (2) The lease contains an option to purchase the leased property at a bargain price. (3) The lease term is equal to or greater than 75 percent of the estimated life of the leased property. (4) The present value of rental and other minimum lease payments equals or exceeds 90 percent of the fair value of the leased property (less any tax credit retained by the lessor). Essentially, if a lease is not classified as a capital lease, then it is an operating lease.

2. Making the decision on Leasing vs Purchasing (Pros and Cons)

Government contracting professionals and private industry representatives must understand how and why the commercial marketplace leases IT.
**Saves Money:** To begin, leasing IT equipment saves agencies money. By leasing IT equipment, agencies can avoid expending money for the entire cost of the equipment up front. Instead, leasing allows the agency to spread out its IT costs over the period of the lease and the equipment’s economic life. Leasing frees up cash flow, thus providing additional cash which can then be used to satisfy the company’s other financial or procurement needs.

**Saves Time:** An organization also can save time when leasing IT equipment. The economic life of IT equipment is short and organizations often have to upgrade their technology to remain competitive in the commercial market. Purchasing new equipment, however, often requires disposing of the old equipment. Selling old IT equipment—whose value is typically low—eats up valuable organizational resources, and typically does not produce a substantial return on investment. By contrast, an organization that leases IT equipment can ship the equipment back to the lessor at the end of the lease period. **Moore’s law** states that the “number of transistors that can be built on the same piece of silicon will double every eighteen months.” Not surprisingly, significant advances in technology are seen about every year and a half. Leasing IT equipment allows an organization to update its systems quicker and easier, and to keep up with Moore’s law.

**Relaxes Budget Constraints:** Leasing IT helps commercial companies avoid internal IT budget restraints. Often, major IT capital purchases in an organization require the approval of top management. However, payments for leased equipment can be treated as operating expenses instead of long-term capital purchases, thereby avoiding budget constraints (and management approval).

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leasing with a refresh cycle gives you access to better equipment than if you purchased it outright, since you lease and pay over time, instead of taking ownership by paying the full cost up-front.</td>
<td>It may end up costing more in the long run, considering deposits, monthly payments, and interest.</td>
</tr>
<tr>
<td>Making smaller monthly payments gives you more flexibility in your budget to manage unexpected expenses.</td>
<td>Lease agreements can be complex and harder to manage than a one-time, up-front purchase.</td>
</tr>
<tr>
<td>Leasing companies may receive discounts on replacement parts or labor costs, making it easier and more cost-effective to have them take care of the maintenance for you.</td>
<td>Lease agreements may be unbreakable, so even if you no longer use the equipment, your agency must continue to pay for it for the duration of the lease.</td>
</tr>
</tbody>
</table>
Upgrading leased equipment is easier than disposing of current equipment and purchasing and installing replacements. Because your leasing company owns the equipment, you must follow their guidelines and reposition upon their request.

Leasing (True Lease), Purchasing, or Lease-Purchasing

Assessment
The way technology is acquired reflects how an agency understands its needs and its current environment. The advantages and disadvantages should be weighed according to the situation, then a cost-benefit analysis should be conducted to assist with the final determination of value. If done properly and in the right situation, leasing can be cost-effective and efficient. If done poorly or without due consideration, leasing will be more expensive and harder to manage than an outright purchase or a lease-purchase acquisition.

Lease vs. Purchase Decision Tree

Key guideline questions
These questions can be used in assessing the organization’s needs and current environment:

**Business Value**
These questions examine the need for new equipment for end users, and the agency’s ability to manage a leasing contract.
1. Does your agency have a formal replacement plan? If so, leasing is feasible. If replacement is done on an as-needed basis, the controls may be lacking to manage a lease.
2. Does your agency currently lease any type of equipment? If so, this can provide useful expertise at identifying the benefits, and drawbacks of leasing in your agency.
3. Does your agency have a business need to replace PCs more often than what is currently done? If so, what is the largest obstacle to more frequent replacement?

**Equipment Life Cycle**
Identifying current agency practices helps to determine if leasing would or would not be useful to the agency. Long-term use of equipment indicates that the costs of leasing would most likely outweigh its benefits.
1. What is the average age of PCs before they are replaced in your agency?
2. How long are servers used?
3. Is data center software upgraded on a regular basis?

**Asset Management**
The ability to know where all of the IT equipment is at a given point in time is crucial to lease management. Tracking only at aggregate levels does not allow the agency to meet leasing terms when the time comes to identify and return the leased equipment. Additional costs for lost/stolen equipment can
add significantly to the cost of a leasing engagement or purchasing. Asset management is critical regardless of whether the equipment is purchased or leased.
1. Does your agency have IT tracking mechanisms in place?
2. Does your agency have a problem with lost or stolen IT equipment? If so, is this a small, medium, or large problem?

**Contract Management**
Effective leasing depends on the ability of the agency to set up the lease properly at the beginning, and then to manage the entire life cycle of the leasing contract. Uncertain funding makes leasing much less feasible.
1. Does your agency have the time to select a vendor?
2. Does your agency have the time to develop a good leasing contract?
3. Does your agency have the time and staff to manage the contract throughout the life cycle of the equipment?
4. What is the stability of the primary source of funding for your IT equipment?

**Advantages and Disadvantages**
The decision over whether to lease, purchase, or lease-purchase technology must be made according to the agency’s understanding of how the equipment will be used. Advantages and disadvantages of each option should be weighed to determine what factors are the most important to the agency.

For example, an agency may need to arrange for a large number of dispersed users to communicate. In this case, leasing may be beneficial as it would allow the agency to obtain the same equipment for all users, and get all the equipment installed quickly and easily. In another case, if an agency seeks to acquire new computers for a select number of employees in one location who use mostly word processing and spreadsheet applications, purchasing may be a better option. This is because the equipment could easily be used for longer than three years, and other users may be able to use the old equipment. The use of the equipment and the needs of the agency drive the acquisition decision. If a lease-purchase decision is based solely on financial measures, all other issues regarding business functions and needs are ignored.

**Purchasing**
Purchasing may be the preferred option if:
- PC equipment is to be used for longer than three years (Note: If the useful life of PCs or laptops is calculated as five years or more, leasing is highly discouraged.)
- The agency does not have staff and systems to track assets and manage the lease
- A technology architecture is not in place
- Funding is uncertain so that the full term of the lease can not be met

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
</table>

---
Wide familiarity and acceptance with purchasing requirements, skills, and techniques.
Responsibilities and management systems for purchased equipment already exist in state organizations.
Purchasing avoids the complexities involved with managing leasing agreements.
Ability to keep equipment for as long as it is needed and to modify it as needed.

May hinder your agency’s ability to take advantage of technological advances when the technology becomes available.
Ties your agency to expensive upgrades of equipment that may become obsolete quickly and thus will be unable to meet agency needs.
Using different levels of equipment and software may require more IT staff time to be spent on repairs than on projects, requires greater knowledge sets among IT employees, and may decrease the ability of employees to exchange information.
Equipment disposal can be time-consuming and costly.
Up-front costs may have adverse impact on agency budgets.
Capital-intensive expenditures for IT with decreasing life cycles.

Leasing (True Lease)
Leasing may be the preferred option if:

- Technology replacement according to industry life cycles is needed
- Agencies are undergoing downsizing or reorganizing
- There is a business need for quick adoption of new technologies
- The flexibility of spreading out payments and using operating funds (rather than capital funds) would be beneficial

Advantages
- Systematic technology replacement. Agencies can establish equipment life cycles and stick to them. New equipment can be obtained, then returned to the vendor when the lease contract ends. Staff time spent maintaining different systems and machines can be reduced.
- Leveled IT expenditures, reducing spikes in capital budgets. Leasing is considered an operating expense and spreads costs over time, rather than requiring repeated, large expenditures in particular fiscal years for hardware and software upgrades.
- Standardization. Good leasing contracts can help organizations standardize on particular platforms quickly and consistently. This

Disadvantages
- Administrative burden to track equipment and deal with vendors. All leased equipment remains the property of the vendor, so agencies must remain aware of where each piece is and what the return requirements are. Inefficiencies in asset management will prove costly in a leasing environment.
- Risk of signing a multi-year contract committing to one technology or one vendor. This could limit agencies’ abilities to deploy and use IT effectively. Locking into a specific vendor could make it difficult for the agency to respond to unforeseen needs due to legislative mandates, federal requirements, or business changes.
- Changes and modifications to leased
results in savings for staff labor and maintenance, and improves agency operating efficiency, even if there are no spectacular savings in acquisition costs. Total maintenance costs can be lowered due to the standardization and to the use of new equipment.

- Easier equipment disposal. With leased equipment, the vendor, as the asset owner, assumes disposal responsibility.
- Shift in view of technology. Leasing can encourage viewing IT equipment as business tools, rather than as state assets with expected longevity or as a personal preference for the employee.

- It is usually critical to adhere to the industry life cycle in order to obtain the most cost-effective lease possible.

| Equipment should be minimized. These will place additional burdens on contract management and add to the cost of the lease. |

**Lease-Purchasing**

Lease-purchasing may be the preferred option if:

- The dollar value of the equipment is substantial and its useful life is longer than three years
- The flexibility of spreading out payments would be beneficial

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>The same as Purchasing.</td>
<td>The same as Purchasing.</td>
</tr>
<tr>
<td>Ability to spread payment over time.</td>
<td></td>
</tr>
<tr>
<td>Flexibility to choose equipment and leverage dollars.</td>
<td></td>
</tr>
</tbody>
</table>

Please note there is a [Lease vs Purchase Tool](#) available at the end of the document.

### 3. Total Cost of Ownership (TCO) Analysis

Total Cost of Ownership (TCO) analysis is a valuable tool in understanding costs and optimizing IT assets. Although the purchase price of [hardware] is the most directly allocable acquisition cost, industry research indicates that the purchase price typically represents less than 20% of the TCO ([http://www.networkalliance.com/your-advantage/understanding-technology-costs](http://www.networkalliance.com/your-advantage/understanding-technology-costs)). Accurate TCO models for [hardware] should account for all the associated ownership costs; the purchase price along with the cost to install, configure and manage [the hardware].

TCO analysis enables organizations to quantify all costs of acquiring, using and deploying IT solutions, both direct and indirect. In an era of shrinking budgets, IT managers need to find ways to push the TCO down. According to Lenovo, TCO can be managed with some specific organizational behaviors: ([https://www.lenovo.com/services_warranty/uk/en/financial_services_pdf.pdf](https://www.lenovo.com/services_warranty/uk/en/financial_services_pdf.pdf))
What pushes up Total Cost of Ownership?

- Many factors can push up Total Cost of Ownership, the key items being:
  - Holding onto IT assets for too long and incurring additional expense
  - High cost and risk associated with the need to dispose of equipment
  - Lack of consistency of standards
  - Multiple vendors and configurations
  - Procurement, management and retirement processes
  - Shortened economic lives on IT equipment

What reduces Total Cost of Ownership?

- Replacing equipment on a regular basis
  - Improves the utilization of resources
  - Reduces the risk of technology obsolescence
  - Reduces end of life support costs
  - Reduces the risk of decreased productivity

- Leasing your IT infrastructure
  - Helps to keep acquisition costs down
  - Drives a regular refresh program
  - Enables equipment to be easily and cost-effectively upgraded or replaced
  - Takes care of disposal responsibilities and costs

Cost Components/Considerations:

- Hardware - Purchase price of the required hardware including delivery
- Deployment - Costs associated with delivering new hardware within the workplace and removing old hardware.
- System/Image build - Costs associated with developing and loading the system image and migrating user data to the new system
- User Training - Costs to train employees on new OS and/or other applications used by new hardware
- Warranty Costs - Costs of warranties in addition to manufacturer’s standard warranty
- Peripherals - Cost to replace additional items needed such as cords, keyboards, docking stations, etc.
- Support
  - Help Desk Support - Costs associated with Telephone and online support
  - On-site Support - Costs associated with support that must be performed locally.
- Software Upgrades - Costs associated with upgrading software to ensure compatibility with new hardware
- Patch Deployment - Costs to patch operating system and applications to mitigate risk.
- Disposal Costs recovery - Residual Value of hardware upon disposal.
- Retirement/Disposal costs - Costs associated with responsible disposal, including the cost to remove the hardware from the workspace.

What are typical values for TCO?
When Gartner published their initial TCO models for IT investments, their conclusion that personal computers can cost an organization up to $10,000 per year was met with skepticism. Over time, the methodology and estimates
of typical TCO values have been widely accepted. Recent studies have shown that while the TCO of PCs can be lowered by proper computer management, the average TCO of a $1,300 desktop computer can be up to around $5,400 when hardware/software costs, support, recurring costs such as internet access, and administration costs are included. A notebook computer, or laptop, that costs $1,500 can have a TCO ranging from $5,000 to close to $10,000 if not taken care of properly. (http://www2.epa.gov/sites/production/files/documents/costofown.pdf)

Figure 1 - Annual TCO for Notebook PCs

As shown in Figure 1. Proper TCO management is directly linked to cost savings by decreasing the indirect costs associated with hardware ownership. (http://www.nashnetworks.ca/total-cost-of-ownership-tco-of-it.htm)

What are some limitations of TCO modeling?

Like any tool, TCO modeling does have limitations. For example:
- Although very likely to reduce long-term costs, TCO modeling itself may initially add cost by asking procurement decision makers to gather and consider more information.
- Since TCO modeling tracks long-term, life-cycle costs, capturing the benefits of TCO analysis in a single year’s budget can be difficult.
- TCO modeling does not assess risk or how well a particular technology fits with an agency’s or facility’s strategic goals or needs.
- TCO modeling does not necessarily track environmental or social costs and benefits.

4. Leasing strategies
After the cost-benefit analysis is completed, the costs and benefits of each option should be compared to see which option is preferable. This section contains additional guidance on leasing strategies for vendor selection, contract negotiation, and contract management, that will make the contract more successful.

Choosing a Vendor
Selecting possible vendors is a crucial step. The two types of information you need about vendors are general company information about who they are and how they do business, and specific information about the vendor’s ability to meet the needs of the agency. Leasing companies can range from equipment producers to third-party lessors. The relationship with the vendor will be made much easier if the two parties understand one another, and feel as if there is some level of trust or commitment to the project. This guide contains a sample vendor selection checklist.

There are three separate aspects to examine in vendor selection: the financing options, the equipment offered, and the services available. A leasing package with built-in technology refresh options may cost more than a straightforward lease, but also ensures that the agency will have access to the newest technologies. By negotiating a lease contract that includes services, an agency can avoid contracting with a separate vendor for maintenance, thus avoiding the cost of managing multiple vendor contracts. If internal staff was previously responsible for maintenance, staff maintenance costs can be saved, and personnel can be freed for more complex, strategic IT work. Before entering a leasing agreement or negotiation, know the type of vendor you are looking for, based on your needs and strategies.

Understanding the organization’s needs and knowing some specifications for a vendor who works well with the organization will make it easier to develop a Request for Information (RFI) or Request for Proposal (RFP) about services. An RFI can be less explicit than an RFP, but should still contain sufficient information so that responses address requirements accurately. The RFP should include all expectations and relevant information about the needs of your agency. This is the best and often the only opportunity for vendors to demonstrate their understanding of your needs and their ability to meet them in a cost-effective manner. Define your requirements and expectations. You may need to establish weights for the criteria in order to identify the most critical needs, but you should list all requirements so that you can make an effective comparison between proposals.

Vendor Acceptance of Current Equipment
In a true lease environment, the vendor may offer to take or purchase existing equipment as part of the lease contract. Agency counsel must be consulted as to whether this is in fact a legal alternative for agencies, as there are legal requirements for asset disposal and equipment trade-ins. This practice does not meet trade-in standards since the agency does not get an asset in return for another asset, as they never take actual ownership of the leased equipment.

Negotiating a Lease Contract
The contract negotiation process hammers out the specific details of the leasing arrangement. It provides an opportunity to ensure that you select the best vendor to work with the organization’s staff. Vendor behavior during the negotiation process can indicate the vendor’s business culture, so evaluate how completely vendors responded to the initial inquiry, and their willingness to answer questions and negotiate fairly. The vendor relationship is always important, but it is even more crucial when service levels are included in the contract, as a good working relationship must be maintained.
Negotiation Considerations

The negotiating team should include staff from the IT, end-user, legal, finance, and purchasing groups. All of these areas will be impacted by the acquisition method, and can bring their unique expertise and viewpoints to the table. To provide a consistent point of access, selected members of the team can be responsible for direct negotiations with the vendor, but all of the viewpoints need to be represented in the process of proposal reviews.

Elements to consider in negotiating a lease include:

- All communications in the negotiation process should go through the agency's negotiating team. Try to ensure that the agency presents a unified front to bidders, so that a contact in one area or group does not provide bidders with information that may differ from what has been presented in the proposal.
- Although it is helpful to negotiate with more than one vendor, recognize that signing with two or more vendor companies adds additional staff costs to the leasing contract. Even if equipment prices are lower, more labor will be required to oversee the management of the contract. This is due to the added layers of communication and coordination between the vendors, as well as between the lessee and the vendors.
- All terms and conditions must be scrutinized carefully, including technical and functional specifications, as many lessors hope to make additional money in these areas.
- The length of the lease should correspond with the necessary life cycle of the equipment and with the industry standard for life cycles. If the agency life cycle is longer than the industry standard, then the cost of leasing needs to be carefully compared to purchasing or lease-purchasing options. Current industry life cycle standards are 36 months for PCs and 24 months for laptops. It is not necessary to accept the industry life cycle as a guide for establishing your own life cycle, as agency business needs may differ.
- Keep in mind that the lowest cost alternative may not be the most cost-effective option. IT leasing contracts tend to change during the course of the contract. The emergence of new technology or a system change may force different options to be evaluated.
- Examine the effects of alternative scenarios on the contract. Calculate the cost for different lease contract lengths, and look at the cost impact of either buying or continuing to lease the technology at the end of the lease. Cover issues such as early termination or contract extension with all the vendors in the negotiating sessions.
- Decide what types of flexibility the organization needs within the contract—equipment changes, early contract termination, options for increasing/decreasing service levels—and then negotiate for the most important items.

Managing a Lease Contract

In order to maintain the benefits of leasing, adequate controls must be in place and maintained during the course of the contract. Insufficient oversight of the contract will result in costly charges, weakening its effectiveness.

Elements to consider in lease contract management include:

- Assign regular staff to manage the lease contract through the term of the lease. This will enhance the ability of the organization to manage the contract effectively.
- Ensuring the vendor meets the terms and conditions of the lease agreement
- Track the life cycle of the equipment along with the financial plan for making the lease payments. This allows staff to ensure the terms of the lease are being enforced, and enables them to track the utility of
the lease contract and the ability of the vendor to meet business needs. Asset management software provided by the vendor can assist in this effort, but the agency is responsible for the actual use of the software and for establishing its own monitoring requirements.

- Develop a method to quickly identify equipment, purchases, and problems. Early identification of potential problems reduces the risk of increased vendor charges. Keeping track of the equipment will reduce expensive problems with returning equipment at the end of the lease.

- Be able to measure the performance and capabilities of the leased equipment and to identify cost savings, improved efficiency, and other results due to the leasing strategy. This will help to justify the continuation of the program and will strengthen the agency’s ability to manage its IT. Establish metrics up front and include the ability to make baseline comparisons. Examples of metrics are: reduced help desk staffing and labor costs, end-user productivity increases due to the acquisition of more suitable equipment, and the presentation of overall cost savings when compared to the previous IT budget. Identifying metrics early helps to establish the business case for leasing and requires input from divisions other than just IT.

- Be able to project end-of-lease alternatives: the lease can be terminated early, the equipment can be returned, the equipment can be purchased, or the lease can be extended. Each of these scenarios has a different effect on the cost of the lease. Penalties for early termination, lease extensions, or equipment purchases can negate the business and economic value of the lease.

Pay specific attention to the lessor’s determination of the equipment’s residual value. This estimate will factor in the decision over whether to purchase or return the equipment. Higher residual values mean that it is more cost-effective for the organization to return the equipment, as the vendor seeks to make additional profit in the resale market. Lower residual values can add value to keeping the equipment past the end of the contract, obtaining additional use for a minimal price.

Consider whether the purchase costs outweigh the savings obtained from leasing the equipment originally. If leasing is a preferred option because of the need to maintain leading-edge equipment, equipment purchase requirements can detract from leasing benefits. Leasing contract management is necessary to help avoid refinancing or renegotiating during the course of the contract. Either of the above alternatives can result in additional costs to the organization, and should be avoided if possible.

- If a lease is to be extended by more than six months, it is often better to purchase the equipment outright rather than extend the lease. This is because the cost of continuing the lease then becomes more expensive than purchasing the equipment at its current residual value.

- Make sure the lease does not automatically renew, and that the leasing company does not expect certain notification requirements about ending the leasing contract. End-of-lease notification can have a significant financial impact on an organization. If any of these clauses are in the contract, make sure to meet them as required or there will be financial penalties that lessen the value of the leasing program.

- Prepare for end-of-lease by having procedures in place to manage the transition of equipment, whether it is new equipment from the same vendor, or if another vendor or acquisition method is chosen. Procedures for saving/moving data and for dealing with sensitive information should be in place.
5. Leasing specific types of equipment

Mainframe/ Minicomputer Hardware Leasing (servers/storage)
(http://www.oregon.gov/das/cio/itip/docs/lsvpur_texas.doc)

Data center equipment such as a mainframe or minicomputer is often among the first items considered for leasing. Mainframes have been available on a captive lease basis since the 1960s. These larger computers are candidates for leasing or lease-purchasing because of the initial investment required, and because of the need to make upgrades to the equipment. Mainframe leasing options are usually subject to captive leasing agreements. Captive leasing agreements are set up differently from other leases, as the initial price bids are lower since vendors make money on the upgrade clauses.

When leasing data center equipment, be aware that the standard leases for many mainframe products are based on monthly pricing. A general rule is that the expense of leasing for thirty months usually equals the cost of purchasing the product, so if the rule holds true for the specific purchase, it is more cost-effective to purchase data center equipment that will be used for more than thirty months.

Telecommunications Equipment Leasing (routers/switches/optical)

Telecommunications systems equipment involves various technologies, equipment types, and user applications, and may be installed in a multitude of locations. Most of the same considerations in leasing computer equipment apply to telecommunications systems. Areas of consideration in determining whether to lease telecommunications equipment include the changing technology environment in data communications, the type of equipment being considered for implementation, and the usual widespread distribution of telecommunications equipment in support of field locations.

Advancements in equipment performance, operating system features, and applications of technology, such as frame relay, ISDN, ATM, etc., seem to make equipment installed the previous year obsolete. Additionally, network managers are constantly being asked to provide greater bandwidth to the networks in order to meet performance requirements.

The lease of data communications equipment, such as routers, switches, DSU/CSUs, and other network support products may assist departments in upgrading networks on a regularly planned basis, preventing them from obsolescence. Units can be upgraded from 56 Kbps bandwidth to T1, OC3, DS3, etc, to provide greater bandwidth, or switched to ISDN technology to reduce costs. Additionally, integration of technologies, business realignments, or consolidations with other networks may require standardization with compatible products as part of a centralized network management plan.

Further considerations in determining whether to lease network equipment include implementation costs and remote installation considerations. Lease agreements can include maintenance and replacement of broken equipment. This is a consideration when supporting large wide area networks. The lease vendor is responsible for the performance of the leased equipment and will need to replace the equipment at the remote locations. This aids the network management staff by requiring the vendor to travel and install replacement parts or require overnight shipments for inoperable equipment. Additionally, lease agreements can include the installation and the implementation of the equipment before billing starts. During large network changeovers, such as when converting to a router/IP environment, the costs for the installation can be rolled into the lease costs reducing the initial outlay not only for the equipment, but also for the implementation.
Finally, expensive items can be leased to defer or eliminate the one-time costs that can delay projects. In converting from an antiquated PBX telephone system, financing costs for large systems, user stations, and new cabling and installation can be accomplished by lease arrangements. Again, the installation costs can be deferred by including the costs in the monthly lease arrangements. There are additional long-term costs to consider because you have to pay interest on the lease.

**PC/Workstation Hardware**

Desktop leasing is a relatively new form of leasing in the technology field, but it has quickly gained popularity in the business world and the federal government. PC leasing is attractive because it eliminates the need to upgrade and manage functionally obsolete PCs as part of the organization’s computing environment. Buying the largest number of desktops needed will lower the purchase price, and eliminate the cost of upgrading in small, additional batches as needed.

The vendor relationship becomes especially important here, due to the number of items being leased and the need to keep track of them all. For example, leasing agreements can aggregate all assets together, so if one item is damaged or cannot be found, the lessor must pay the residual value for all the items. Another example is the need to return all items leased in the original packing materials. While these examples are often cited as reasons not to lease, good vendor selection and contract negotiation processes can help to eliminate these items as sources of conflict.

PCs are often moved, so inventory tracking is essential and the right to move PCs must be included in the contract. Peripherals are not often considered in the leasing process. Printers and/or software can be included in bundled vendor offerings, so it is important to break down the specific costs involved with each section of the bundled offering. If software or peripherals are offered as part of a bundled service package, determine what part of the cost of the leasing package applies to those items. Decide if that cost provides benefit to the organization, or if it should be eliminated and used as a negotiation tool to win concessions that are more valuable.

PC leasing is especially service-oriented, because end users are heavily involved and because the equipment is distributed across the enterprise. Asset management software, usage reports, and other management tools that may be offered by vendors can help organizations with making strategic decisions regarding future computing directions.

Laptops were traditionally considered poor candidates for leasing because of equipment movement and wear and tear on machines. This opinion is changing, however, as laptop use becomes more common among end users. Leasing companies now offer laptop leasing in order to meet the business need for equipment with a relatively short life cycle. Leasing can also avoid expensive upgrades or repairs that add to the cost of the machines and limit the agency’s ability to reuse them. Although laptop leasing is attracting more interest from both vendors and users, special care must be paid to terms and conditions in laptop leasing contracts. Laptops should be leased in a separate, dedicated contract and the lessee must pay attention to imposed costs for lost, stolen, or broken equipment. Examine these costs based upon the agency’s experience with these issues in order to determine the cost-effectiveness of a particular vendor’s offering.

**7. Current Acquisition Vehicles that support leasing**
There are Government contracting vehicles in place that currently offer Leasing of IT Hardware.

**GSA Multiple Award IT Schedule 70**
(http://gsa.gov/portal/content/188085)
GSA's IT Schedule 70 is the largest, most widely used acquisition vehicle in the federal government. Schedule 70 is an indefinite delivery/indefinite quantity (IDIQ) multiple award schedule, providing direct access to products, services and solutions from more than 5,000 certified industry partners. IT Schedule 70 offers federal, state and local governments innovative solutions to their information technology needs. The procurement process can be daunting, so GSA has worked diligently to streamline the process and maximize results. Currently, there are 39 vendors that offer leasing under the IT 70 Schedule, of those 24 are Small Businesses and 5 are Women Owned. Their contracts are for five years, with three additional five-year options.

**Army Chess**
(https://chess.army.mil/Content/Page/HW_CONT)

**ADMC-2 Hardware Contracts**
The scope of the Army Desktop and Mobile Computing-2 contract includes commodity purchases of commercial off-the-shelf desktops, notebooks, ruggedized and semi-ruggedized devices, personal digital assistants, printers, scanners, power supplies, displays, video teleconferencing equipment (VTC), digital cameras, displays, transit cases and related accessories and upgrades. Limited services include: installation, asset tagging, imaging, site survey, system configuration. Ordering is open to Army, DOD and other Federal Agencies. Currently there are 8 vendors and those 5 are small business

**ITES-2H Hardware Contracts**
The scope of the Information Technology Enterprise Solutions-2 Hardware contract includes IT hardware solutions of commercial off-the-shelf RISC/EPIC servers, Windows based servers, workstations, thin clients, desktops and notebooks (as part of a total solution), storage systems, networking equipment, network printers, cables, connectors, cabinets, video teleconferencing equipment (VTC), power supplies and related ancillaries. Services include: system configuration and integration, physical site analysis, installation and relocation, high availability configuration and legacy equipment warranty/maintenance. Ordering is open to Army only. Currently there are 4 vendors and 2 of these are small businesses

**NASA Solutions for Enterprise Wide Procurement (SEWP) contract vehicle**
(http://www.sewp.nasa.gov/geninfo.shtml#WHAT)
Provides the latest in Information Technology (IT) products and services, the Solutions for Enterprise-Wide Procurement contract vehicle has a track record of serving up fresh technology for Federal Agencies. SEWP is a Government-Wide Acquisition Contract (GWAC) consisting of 148 Competed Prime Contract Holders, including 17 small businesses. Small Business categories include: Service Disabled Veteran-Owned Small Businesses (SDVOSB); Woman Owned Small Businesses (WOSB); HUBZone Small Businesses; Veteran-Owned Small Businesses (VOSB); and Small Disadvantaged Businesses (SDB). The SEWP contracts offer a vast selection and wide range of advanced technology, including, desktops and servers, IT peripherals, network equipment, storage systems, security tools, software products, cloud based services, telecommunication, Health IT, video conferencing systems and other IT and Audio-Visual products along with product based services such as installation and maintenance to all Federal Agencies (including Department of Defense) and their approved support service contractors.
SEWP is divided into 4 Groups of contracts.

- Groups A, B(1), B(2), C and D were awarded through a competitive process.
- Group A was a full and open competition and consists primarily of large and small OEM’s/manufacturers.
- Groups B, C, and D consists primarily of Value Added Resellers.
- Group B(1) was a small business set-aside competition for HUBZone businesses.
- Group B(2) was a small business set-aside for Service Disabled Veteran Owned Small Businesses (SDVOSB).
- Group C was a small business set-aside for Small Businesses.
- Group D was a full and open competition and consists of both small and large businesses.

Appendix - Available Tools

9. DOI Lease vs Purchase cost analysis tool (link)

The Department of Interior (DOI) recognized the need to help officials decide whether leasing or purchasing is the most economical acquisition method. They created a tool to analyze the cost of a Lease versus Purchase of Equipment. This tool is required for DOI contracts where a lease is used. ([http://www.doi.gov/pam/programs/property_management/upload/GUIDANCE-LEASE-VS-PURCHASE-ANALYSIS-and-TOOL.pdf](http://www.doi.gov/pam/programs/property_management/upload/GUIDANCE-LEASE-VS-PURCHASE-ANALYSIS-and-TOOL.pdf))

Lease contract negotiation checklist

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONTRACT DETAILS</strong></td>
<td></td>
</tr>
<tr>
<td>Does the contract provide details about the type of lease?</td>
<td></td>
</tr>
<tr>
<td>Does it provide details about the lease expiration date?</td>
<td></td>
</tr>
<tr>
<td>Does it provide details about the payment procedures: amount, method, type of payment (including security deposits, down payments)?</td>
<td></td>
</tr>
<tr>
<td>Does it provide details about the deadlines for cancellation, renewal, and contract change notices?</td>
<td></td>
</tr>
<tr>
<td>Does it provide details about the time frame? Match the start of the lease to the agency’s time frame. Do not accept an interim lease payment if a lessor starts leases at certain times.</td>
<td></td>
</tr>
<tr>
<td>Is the price of contract modification included for early termination?</td>
<td></td>
</tr>
<tr>
<td>Is the price of contract modification included for return to lessor?</td>
<td></td>
</tr>
<tr>
<td>Is the price of contract modification included for extension of lease?</td>
<td></td>
</tr>
<tr>
<td>Is the price of contract modification included for purchase option at end of lease?</td>
<td></td>
</tr>
<tr>
<td><strong>Is the price of contract modification included for upgrades?</strong></td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
<td>--</td>
</tr>
<tr>
<td><strong>Is there a provision allowing each piece of the lease to be treated as a separate item? This allows the lessee to replace/purchase/renew individual pieces rather than dealing with the IT assets collectively.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Is there a provision allowing substitution of like items for lost or damaged equipment at end of lease?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>YES</strong></td>
<td><strong>NO</strong></td>
</tr>
<tr>
<td><strong>Is there a complete description of property to be leased?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Are delivery times and dates specified?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Are warranty period and conditions, including Year 2000 warranties, defined?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Is acceptance criteria defined?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Are insurance and business continuity requirements defined?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Has the provision of loaner equipment in case of damage/repair been addressed?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>YES</strong></td>
<td><strong>NO</strong></td>
</tr>
<tr>
<td><strong>Is estimated residual value specified? If the lease needs to be renewed for a short term, it should be renegotiated to reflect the actual (lower) value of the equipment.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Are end-of-lease notification requirements clearly defined for notification by vendor prior to end-of-lease?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Are end-of-lease notification requirements clearly defined for ensuring end of lease does not automatically renew?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Are end-of-lease notification requirements clearly defined for ensuring vendor does not expect certain notification requirements? (If so, make sure to pay attention to this issue when managing the contract.)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Are packaging and shipping terms defined? (Note: Do not sign a contract that requires equipment to be returned in original packing)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>YES</strong></td>
<td><strong>NO</strong></td>
</tr>
<tr>
<td><strong>Are maintenance and upgrade minimum standards to be met by the agency defined?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Are roles and responsibilities for support agreements outlined for maintenance—amount and type (i.e., by telephone or on-site)?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Are roles and responsibilities for support agreements outlined for downtime? Determine acceptable level, response time.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Are roles and responsibilities for support agreements outlined for vendor management assistance (software, reports)?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Are roles and responsibilities for support agreements outlined for installation—full, partial, minimum?</strong></td>
<td></td>
</tr>
</tbody>
</table>
### Vendor Selection checklist/ recommendations on how to select vendors

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>CHECKLIST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Complete a thorough vendor background check.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Are they financially stable? (check credit reports and bank references)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Do they have a good leasing track record?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Verify vendor qualification.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Do they have the quality and quantity of staff needed to carry out the contract?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Do they have the ability to carry out the administration requirements specifically related to your agency needs (i.e., billing)?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Do they have the ability to manage their own risks?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Do they have experience with providing the equipment you need?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Do they have experience handling the type or size of contract you need?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If contracting for multiple locations, particularly over a wide geographic area, does vendor have the ability to meet needs at all locations?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Do they describe how they handle equipment disposal at the end of the lease?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is the end-of-lease purchase price determined?</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td>Does the vendor allow substitution of like items for lost or damaged equipment?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the vendor provide end-of-lease notification?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the vendor provide notification of lease transference?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have life cycle scenario costs been considered for early termination?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have life cycle scenario costs been considered for return to lessor?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have life cycle scenario costs been considered for extension of lease?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have life cycle scenario costs been considered for a purchase option at end of lease?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has the vendor specified the estimated residual value? (A higher residual value can mean lower lease payments since the vendor can make money on the asset resale.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have standards of equipment usage been verified for moves, changes, reassignments, and upgrades without vendor permission?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the lessor define the appropriate environment for the equipment—i.e., voltage, operational environmental requirements?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have service level agreements been verified for installation—full, partial, minimum?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have service level agreements been verified for maintenance requirements, including acceptable downtime (if any)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have service level agreements been verified for asset management requirements—i.e., what type of software is included, will the vendor provide tracking reports?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have service level agreements been verified for upgrade flexibility options?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### EPA TCO Tool

This Total Cost of Ownership Calculator Tool allows you to compare the total cost of ownership of alternative products or product life cycle management scenarios. The Calculator Tool allows the user to enter up to 4 different products or scenarios for purchasing, operations and maintenance, and end of life management of computer equipment. While the emphasis is on decisions with a potential environmental impact, this tool includes data entry fields for any costs that the user might consider in a TCO analysis. The user can also modify the tool to include additional cost categories of interest.
Thank you for downloading this whitepaper. For more great resources like this, visit the Acquisition Gateway via the following link: http://go.usa.gov/x3YYP.