

Exhibit A: Assessing the Need for Equipment Maintenance Contracts

Whether the equipment is new to the agency, or has been in use at the agency for a period of time, agency managers should assess the need for equipment maintenance contracts by answering the following:

- Is there sufficient evidence (e.g., within the agency or other State's agencies, within the industry) to determine if there is a correlation between age, use and break down rates? If so:
 - How old is the equipment?
 - How durable is the equipment?
 - How often will the equipment be in use? If it is kept as a spare, does it require regular maintenance?
 - Is the equipment required to run at a consistent level continually or are there irregular periods of high load?
 - How often does the equipment break down?
 - Has the performance of the equipment degraded over time?
 - If the equipment does not have a history of breaking down, is this because the equipment is durable, or because it has received preventive maintenance?
- For information technology equipment, is the equipment running in a fault-tolerant or high availability architecture? How many nodes are there in the cluster? What is the capacity impact of a single node failure (especially if not all nodes are equal)? Given the architecture, what is the appropriate response time to address equipment problems without facing unacceptable consequences (e.g., two hours, four hours, next business day, other)?
- Can an information technology equipment environment be suitably isolated to remove the requirement for ongoing changes? Are change-management procedures and controls sufficiently robust to enforce a "no change" policy for the localized environment?
- What is the likelihood that the equipment would break down due to the following:
 - Defects?
 - Acts of God?
 - User error?
 - Would the cost of the repairs for each of the above be covered by the maintenance agreement?
- How long will the equipment be under warranty? What services does the warranty cover? Are these warranty services the same services offered by the vendor under the preventive or remedial maintenance contract? If not, how do they differ? Should the agency defer its maintenance agreement until after the warranty expires?

- Does the agency require equipment maintenance or specialized expertise that can only be provided by a vendor (e.g., firmware upgrades to computer equipment)?
- How often will the agency need to replace equipment?
- Is it more cost effective to replace the equipment than to carry a maintenance agreement?
- How often does the agency anticipate the need to purchase replacement parts?
 - How many vendors provide needed parts?
 - Are the parts at risk of becoming obsolete/scarce?
 - Will the agency be able to retain retired equipment to use for spare parts?
- Is there a difference in the vendor's response time to conduct repairs if the agency does not have an equipment maintenance contract?
 - If so, does this significantly impact the agency's operations?
- What are the consequences if the equipment breaks down and the agency does not have a maintenance plan? Can the agency accept this risk? What compensating systems are in place if the equipment malfunctions?
- Would a lack of a maintenance agreement on the equipment jeopardize the safety of employees and/or the public?
- Will the vendor dedicate, or will the agency require, personnel with specific qualifications or credentials to perform equipment maintenance?
 - How many personnel does the agency need to affect proper equipment maintenance?
- Is it more cost effective for the agency to perform equipment maintenance services internally?
- If there is no maintenance contract, and if multiple repairs are needed over time, will the agency be able to bring in suitable repair vendors under State procurement laws within acceptable timeframes?

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