

Alternate Facilities and Technology Replacement Options

Option and Description	Pros/Cons
<p style="text-align: center;">Cold site</p> <p>Vendor supplied computer ready space, usually including conditioned power, raised floor, basic LAN capabilities, security, and climate control.</p>	<p>Computer hardware is not included and must be acquired and installed at time of disaster. Office equipment, telephony and other items are also not usually included in this service.</p>
<p style="text-align: center;">Hardware replacement after the disaster.</p> <p>This is using a strategy that is based on acquiring replacement hardware at the time of disaster and assumes a location is available for installation, i.e. cold site.</p>	<p>Equipment will likely not be readily available at time of disaster. Should not be considered for strategy for systems required in less than two weeks. Not appropriate for critical systems.</p> <p>May still meet recovery time requirements of critical systems, if restore/recovery plus the delivery time fall below the recovery time requirement. Typically used for low criticality systems, depending on hardware type i.e. acquiring desktops is more likely than servers.</p>
<p style="text-align: center;">Quick ship</p> <p>A contracted service that guarantees delivery of specified computer and communications hardware within a specified period of time.</p>	<p>High assurance of equipment availability after 24/48 hours. Can ship to any specified location with accompanying technical resource to set up equipment. Flexibility in disaster scenario. Flexibility in testing.</p> <p>May be appropriate for some lower priority applications and shipped into Cupertino at time of disaster.</p>
<p style="text-align: center;">Mobile recovery center</p> <p>A contracted recovery service that delivers a trailer or mobile unit equipped to act as a computer room or work area. Typically includes generator, air conditioning, office furniture, cell phones, physical security, communications facilities, technical support staff. Can be delivered with PC's and servers.</p>	<p>Provides for local server and workspace placement. Likely 24-48 hours for mobile recovery trailer to arrive. Flexibility in location of space and hardware.</p> <p>Not needed for applications being addressed currently but may have applicability for locations not needing immediate recovery capability.</p>
<p style="text-align: center;">Commercial hot site</p> <p>A contracted recovery service to</p>	<p>Strong assurance of facility and equipment availability as soon as disaster is declared. Allows for recovery of applications typically needing 24-72</p>

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<p>use the computer hardware and network facilities in the vendor's own recovery site (called a hot site). The two primary vendors in this service area are SunGard Availability Services and IBM Business Continuity and Recovery Services</p>	<p>hour RTO. Based on a shared cost/shared risk model meaning no guarantee is provided for access to the facilities and technology under subscription in the event of multiple disasters creating multiple disaster declaration for the same facilities. Provides ability to test capability.</p>
<p>Customer hardware located at the recovery vendor's hot site</p> <p>Spare, test, and development hardware placed at vendor site to be used in the event of a disaster. May be installed as hot standby or installed when needed.</p>	<p>Provides same quick access as vendor hot site option. Addresses shared equipment risk normal hot site subscription brings. Vendor will manage physical requirements of these now remote systems (tape changes, system cycling, hardware reconfigs, etc.). Potential for significant cost savings over customer owned facility as data center infrastructure is leased on an as-required basis.</p>
<p>Dual Customer productions data centers</p> <p>A second Customer data center to spread the risk of a disaster between two geographically separate locations.</p>	<p>Very expensive option - hardware, space, and staffing costs increase dramatically. Maintenance costs for this strategy are also high. Typically used by companies with high availability needs, who cannot assume the risk of a shared model, and who can split and manage the IT workload between the two centers and still deliver the appropriate service levels to the business users.</p>
<p>High availability at a second Customer site (offsite mirroring and servers in standby/failover mode)</p> <p>A fully redundant set of hardware used to completely mirror every event in the primary production system.</p>	<p>Highest level of data availability and integrity for disaster recovery. The Cupertino data center will provide this environment for mission critical business applications such as Oracle 11i.</p>

Alternate Work/Office Space Options

Option and Description	Pros/Cons
Mobile recovery center	Users can be local to regular work location, eliminating travel. Provides for guaranteed user work area. Flexibility in recovery location. Not disruptive to existing staff/sites. Can be owned or subscribed to from a number of sources.
Another customer building on the customer's campus	Users are local to regular work location. May be expensive to have idle workspace or space may not be available at time of disaster. Existing network connectivity will likely exist. Slight reconfiguration may be required.
Work from Home	Employees are equipped with technologies at home that will allow them access to IT facilities (computer and communications) that will enable them to perform their needed business functions from home. Requires the needed technologies and processes in place to address any process changes this working environment may present.
Another customer office off campus	Some users are local to regular work location. May be expensive to have idle workspace or space may not be available at time of disaster. Some network connectivity may or may not exist. Reconfiguration may be required.
Hotels	Hotels are often considered for use as temporary office space in a disaster because they do have telephones and office support services. However, there is no guarantee that Customer would be able to house its critical staff at time of disaster.
Office space rented at time of disaster	Success of this option would depend entirely on the supply of built out office space in the area affected by the disaster. There is no guarantee that the required space may be available at time of disaster.