Paul Womer

Tier 3 Flash research

MIS 2501

If our data center is left at its current capabilities we stand to lose 77 million dollars over the next three years. We are currently operating at Tier I, which leaves us susceptible to system outages. Improving our infrastructure to Tier III will drastically reduce those outages. Upgrading our data center will reduce our cost of downtime to 4.6 million over the course of three years.

We are currently susceptible to disruption from both planned and unplanned activities. Operation errors of site infrastructure components now cause data center disruption. In order to perform preventative maintenance on our current system we need to completely shut down our system under its current configuration. With an upgrade to Tier III infrastructure we will have redundancy; if a component fails we have another take its place in real time, which includes distribution paths that are independent of each other. Thus reducing the occurrence of system shut down. Our cooling system will have to be improved Tier III data center standards should have a cooling system in place capable of handling the most extreme ambient temperature recorded for that region in the last 25 years. In order to have a Tier III data center we will need to ensure there is at least 12 hours of fuel on site. Data centers typically of Tier III quality have backup data centers for disaster recovery.

We are currently operating at 99.67% availability, this costs us 28.9 hours of downtime per year. Our cost of downtime per minute is $14,800. With an upgrade to a Tier III center our availability will increase to 99.98% reducing our downtime to 1.75 hours. The upgrade will require a onetime investment of 35 million dollars. This upgrade will reduce costs by 72 million dollars a year; our initial investment will be paid back in just under 2 years.

References

Uptime Institute, “*Data Center Site Infrastructure Tier Standard: Topology*,” Uptime Institute Professional Services, LLC.

Searchdatacenter.in. “*Tier 3 Data Center Design: The Cooling Checklist*” <http://searchdatacenter.techtarget.in/tip/Tier-3-data-center-design-The-cooling-checklist>

# Gartner. “*Key Considerations for Selecting Cloud Providers for Enterprise Requirements in Asia/Pacific*” <http://my.gartner.com/portal/server.pt?open=512&objID=260&mode=2&PageID=3460702&resId=2059415&ref=QuickSearch&sthkw=tier+3+data+center>