

Flash Research Assignment #1: Data Centers and Networking

Over the next 3 years, our organization could be saving \$72,343,584 by upgrading our data center. Our current and primitive “Tier 1” data center has caused 10 unscheduled outages to our ERP system this past year, along with an average of 90 minutes of related downtime (“Downtime, Outages and Failures”). This costs our organization \$13,320,000 per year. The solution to these issues lie in a “Tier III” data center.

Currently, our Tier I data center is very outdated, and, thus, as the CTA, I am recommending upgrading to Tier III. While Tier I is clearly better than an ordinary office setting and provides a 99.67% availability rate, there are alternatives that provide a higher rate of reliability. The Tier III’s data center’s infrastructure would greatly overshadow our current one, and its key capabilities over a Tier I center are numerous, mostly due to the functionality of its *Concurrent Maintenance* concept. This means that “*each and every* capacity or distribution component necessary to support the IT processing environment can be maintained on a planned basis without impact to the IT environment” (Uptime Institute, 6). As a result, the system would perform a lot closer to its originally intended process as opposed to Tier I, *and* would provide an availability rate of 99.98%.

By performing a cost and benefit analysis, I realized that not only is this implementation feasible, but it would save our organization millions of dollars in the long-run. Our organization faces a lot of downtime with the Tier I data center, costing \$14,800 per minute and totaling \$13,320,000 per year. The difference in availability between Tier I and Tier III is .0031%, which represents the availability that would be lost if we continued to use Tier I. It also represents the availability that would be gained by switching over to Tier III. That percentage equates to about 1,629.36 minutes of downtime, which converts to \$24,114,528, the cost of downtime per year by continuing to use a Tier I data center. That number also represents the amount our organization would *save* per year. While switching from Tier I to Tier III will cost \$35 million, the company will profit from the investment within the second year of implementation. The amount of money saved in preventing downtime would make the return on investment break even before the midpoint of year 2, and from that point forward it would be entirely profitable. Over the course of the next 3 years, \$72,343,584 would be saved in downtime costs, which, including the initial investment into the Tier III data center, would translate to \$37,343,584. Thus, serious consideration should be made to upgrade our current inadequate facilities. The Tier III data center creates significant financial value for our company.

Works Cited

"Downtime, Outages and Failures - Understanding Their True Costs." *Cost of Downtime, Outages and System Failure in IT – Understanding True Cost*. N.p., n.d. Web. 03 Feb. 2014. <<http://www.evolver.com/blog/downtime-outages-and-failures-understanding-their-true-costs.html>>.

"Tier Standards Overview." *Data Center Tier Standards*. Colocation America, n.d. Web. 02 Feb. 2014.

Uptime Institute Professional Services, LLC, comp. "Data Center Site Infrastructure Tier Standard: Topology." (2010): 1-8. Uptime Institute, LLC, 2010. Web. 03 Feb. 2014.