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Flash Research Assignment: Data Centers and Networking

Our current Tier I data center is costing our company over \$25 million a year due to downtime from many outages, but by investing in a Tier III data center, our company could save \$24 million a year. Our current downtime not only increases our expenses, but also diminishes our reputation since we cannot process orders and could potentially lose future clients and income. Implementing a Tier III center will increase availability through many aspects of its Concurrently Maintainable site infrastructure. The higher availability will directly translate into downtime cost reduction.

The Tier III data center, being Concurrently Maintainable, will have redundant capacity components and multiple independent distribution paths. Only one of these paths has to be on at any time, so work and repairs can be done without shutting down the entire system. There will also be permanently installed capacity to meet the needs of the site when redundant components are taken out of service for any reason. All of these features and upgrades will increase the availability of our data center from 99.67% to 99.98%.

Once it is put into operation, that small increase in availability percentage will create savings and benefit of \$24 million per year. The data center will take one year and \$35 million to complete. At the end of a three-year period, we see total costs of \$35 million but total benefit of \$48 million, leading to a net benefit of \$13 million.

	Minutes/Year	Availability	Downtime(min/year)	Downtime Cost
Tier 1	525,600	99.67%	1734.48	\$25,670,304.00
Tier 3	525,600	99.98%	105.12	\$1,555,776.00
Savings				\$24,114,528.00

	Year 1	Year 2	Year 3	Totals
Cost	\$35,000,000.00	\$0.00	\$0.00	\$35,000,000.00
Benefit	\$0.00	\$24,114,528.00	\$24,114,528.00	\$48,229,056.00
3 Year Net Benefit				\$13,229,056.00
3 Year ROI				37.80%

Work Cited

Uptime Institute, LLC. "Data Center Site Infrastructure Tier Standard: Topology." New York, NY, 2012.

Clark, Jeff. "The Price of Data Center Availability." Datacenterjournal.com. 2012. Web.

Perlin, Martin. "Downtime, Outages and Failures- Understanding Their True Costs."

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