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Data Centers and Networking

Our company could experience a net benefit of $13.2 million over the next three years if we upgrade to a Tier III data center. Our current Tier I data center has insufficient capability to support our operations, resulting in multiple outages and loss of revenue. Our company should invest in a Tier III data center because its redundancy of critical system components will save us $14,800 per minute of downtime.

The Tier I data center does not have a redundant capacity and only has one critical path serving the critical environment, making it susceptible to disruption. On the other hand, a Tier III data center has redundant capacity components and multiple critical paths. In case of an unexpected interruption, another redundant component will still be able to operate without impacting the critical environment. As a result, a Tier III data center has 0.31% higher availability than that of a Tier I data center, which significantly reduces the amount of downtime from 1,734 to 105 minutes per year.

Building a Tier III data center will take a year and require an upfront cost of $35,000,000. We will save $24,114,528 per year on the cost of downtime and upon three years of its implementation, our total savings will amount to $48,229,056. This will result in a net benefit of $13,229,056 for our company.

	Tier I	Tier III
Minutes per year	525,600	525,600
% Availability	99.67	99.98
% Downtime	0.33	0.02
Minutes of downtime per year	1,734.48	105.12
Cost per minute	14,800	14,800
Total cost of downtime per year	25,670,304	1,555,776

Cost savings on downtime per year: $24,114,528

	Year 1	Year 2	Year 3	Total
Costs	35,000,000	-	-	35,000,000
Savings	-	24,114,528	24,114,528	48,229,056

Net benefit over 3 years: $13,229,056

Works Cited

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