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Flash Research Assignment: Data Centers and Networking

Over the past year, our company has experienced 10 outages to its ERP system. As a result of our existing inadequate facilities, a switch is needed from Tier I to Tier III data center, which will increase availability from 99.67% to 99.98%. This change will help avoid further operational problems and save the company over $13 million in the next three years.

When our systems are down, orders are not processed, product is not made, or shipped. To salvage this issue, the Tier III data center will create multiple independent distribution paths that will assure the functionality of the IT environment even if a single area fails. In contrast, Tier I data center only has a single, non-redundant distribution path which will result in the whole area failing completely if a single factor is inhibited. In a Tier III data center, a redundant path for cooling and power is added that will be able to support the IT environment even if it needs to be shut down and maintained. Through these capabilities, a Tier III data center will reduce the annual downtime from 28.8 hours to 1.6 hours. This system is built to run effectively and will make sure that the company doesn't suffer from a shutdown.

With the initial cost of implementation of $35,000,000, our rapidly growing manufacturing company will be able to offer full-time support to assure the production, shipping, and processing operations. By investing in the Tier III data center, the company will acquire $24,114,528 in net savings and generate a net benefit of $13,229,056 in three years. The savings and the benefits that Tier III data center will produce are essential for the future of the business.

Savings of Tier III vs. Tier I Data Center Per Year

	Minutes in a year	Availability	Downtime (min/year)	Downtime Cost
Tier I	525,600	99.67%	1,734.5	$25,670,304
Tier III	525,600	99.98%	105.1	$1,555,776
Savings				**$24,114,528**

Savings of Tier III vs. Tier I Data Center in 3 Years

	Year 1	Year 2	Year 3	Total
Costs	$35,000,000	$0	$0	$35,000,000
Benefits	$0	$24,114,528	$24,114,528	$48,229,056
3 Year Benefits				**$13,229,056**

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