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Enterprise IT Architecture

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Flash Research Paper: Data Centers and Networking

Currently our company is losing $44 million per year due to the issues with our Tier 1 data centers. If we upgrade to Tier 3 data centers we will incur a net benefit of $48.4 million over the next 3 years.

Currently, we have basic Tier 1 data centers. These data centers are missing a key aspect that the newer, Tier 3 data centers have which is redundant pieces. The appeal of redundant components in a data center is the ability to perform maintenance on part of the data center that needs it while still having the ability to keep the data center running. Productivity doesn't need to halt every time maintenance is performed or there is an issue with one piece of the data center. This small detail alone saves a company thousands of minutes of downtime which can now be spent productively.

With our current data centers, we experience 10 outages per year. These outages cost us, on average, $4,440,000 each time which adds up to $44.4 million dollars per year. By upgrading to Tier 3 data centers we increase the availability of our datacenters by 61% which will save us over $40 million per year on data center outages. Installation of a new data center will cost $35 million up front. This amount will be made up immediately, though each year this new data center will save us in excess of $44 million. Over a three-year period, the new data centers will save us $83 million due to less down time while only costing $35 million. This means that over the next three years, the adoption of a Tier 3 datacenter will provide our company a net benefit of $48 million. A Tier 3 datacenter would be a worthwhile investment for our company.

	Minutes of Downtime	Downtime Cost per year		
Tier 1	3,000	$44,400,000		
Tier 3	182	$2,693,600		

	Year 1	Year 2	Year 3	Total
Cost	$35,000,000	$0	$0	$35,000,000
Benefit	$0	$41,706,400	$41,706,400	$83,412,800

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