From: Brittany Cougle

To: CIO Mart Doyle

Subject: Tier III Data Center

The Tier I data center we are currently using is outdated and costing the company $25.7 million per year. Over the past year our organization has experienced ten unplanned outages due to our inadequate Tier I system, costing us severely as we are unable to process orders, or make and ship products. By investing in a Tier III data center we will be able to decrease our yearly downtime costs by $22.56 million.

A Tier III data center is more efficient than a Tier I data center because it has a concurrently maintainable data center, meaning it has redundant capacity components and multiple distribution parts. Therefore, with Tier III data centers, scheduled maintenance and repairs can take place without disrupting the operations in the data center. Currently Tier I's scheduled maintenance will affect the data center performance as if the maintenance were an unplanned outage. Tier III data centers are able to sustain a power outage for 72 hours and are also designed to be upgraded to a Tier IV data center when the business requires extra protection. Tier III data centers are more efficient than Tier I data centers because they are less susceptible to outages, and can perform even during

After investing $35 million in the construction of a Tier III data center, costs will only be $1.56 million per year, while the downtime costs of our Tier I data center are currently $25.6 million per year. Therefore, our yearly benefit from investing in a Tier III data center will be $22.56 million. By decreasing our downtime by 27.16 hours per year, we will be increasing our overall efficiency and receiving a net benefit of $13.3 million. Within 1.5 years, the benefits of implementing the Tier III data center will outweigh the construction cost of $35 million.

Diagram A				
	Availability (%)	Downtime (min/yr)	Downtime Cost	
Tier 1	99.67%	1734.48	$ 25,670,304	5203.44
Tier 3	99.98%	105.12	$ 1,555,776	315.36

Diagram B		
Year	Costs	Benefits
1	$ 36,555,776	$ (35,000,000)
2	$ 1,555,776	$ 24,114,528
3	$ 1,555,776	$ 24,114,528
3 Year Totals	$ 39,667,328	$ 13,229,056
	Yearly Benefit	$ 22,558,752

References

"Data Center Tiers." North American Data Center Practice. Web. 04 Feb. 2013.

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