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Flash Research Paper 1

We can save over $48 million by upgrading our data center to a Tier III center over 3 years. Tier III centers provide reliable redundancy and backups for critical systems in our data center which our current Tier I center does not provide. Over a three-year period, our company will see a 38% return on investment.

A Tier III center provides us with a state of the art "Concurrently Maintainable Site Infrastructure." This would mean that we would have dual power distribution paths, the ability to concurrently perform maintenance without disruption, as well as twelve hours of on-site fuel to power our backup generators in the event of a power outage. We currently face 99.67% reliability in our Tier I center, however a Tier III center will provide us with 99.98% reliability. While we lose $14,800 per minute of down time, a Tier III center will be able to mitigate most of our costs due to the reliability factor. Tier III can cover any predictable outages however we will still be susceptible to unforeseen outages due to operational errors and component disruptions.

The premise of this $35 million investment would be to increase our redundancy across the board and reduce our downtime from our current average of 1,734 minutes down to about 105 minutes of downtime a year. Our benefit would be over $48 million and our net benefit over three years will be $13 million, a 38% return on investment.

	Mins/year	Availability	Downtime (mins/yr)	Downtime Cost
Tier I	525,600	99.67%	1734.48	$25,670,304.00
Tier III	525,600	99.98%	105.12	$1,555,776.00
			Savings	$24,114,528.00

	Year 1	Year 2	Year 3	Total
Costs	$35,000,000	$0	$0	$35,000,000
Benefits	0	$24,114,528.00	$24,114,528.00	$48,229,056
3 Yr. Net Benefit				$13,229,056
3 Yr. ROI				38%

Works Referenced

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