

Andrea Behler

Flash Research #1

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Data Centers and Networking

Investing in a Tier III data center has an opportunity to net our company a benefit of \$13 million after just 3 years. A Tier III data center operates at 99.98% availability and has redundant capacity, which prevents costly downtime. Redundant capacity will support our business by allowing us to perform maintenance while the data center is still running, increasing our availability, and ultimately benefiting our bottom line with more run-time.

Our primitive Tier I data center has resulted in 10 outages to our ERP this year due to operational problems. A key capability of a Tier III structure is that it provides multiple independent distribution paths, compared to the single path in our current Tier I Structure. With this redundancy, we can perform maintenance while continuing to run our servers. The Tier III structure will also prevent downtime, operating at 99.98% availability compared to our current infrastructure with 99.67% availability. This advanced capability will cut our minutes of downtime from 1734 to just 105 minutes, reducing downtime costs by 94% per year.

Implementing a Tier III data center includes a one time cost of \$35M to build the data center over one year. The Tier III data center can decrease downtime minutes by 94%. At a cost of \$14,800 per minute of downtime, this will result in a total benefit of \$48M over 3 years. This investment in a Tier III data center will continue to contribute to our bottom line and support our growing company for years in the future with a 3-year net benefit of \$13M.

I. References

Gage, Clinton. "Tier Classification System." *Uptime Institute LLC*, Uptime Institute.

Ovh. "Understanding Tier 3 and Tier 4." *Tier 3/Tier 4: Datacentre Classification – OVH*.

Turner, W. Pitt, et al. "Data Center Site Infrastructure Tier Standard: Topology." *Uptime Institute LLC*, 2009.

II. Calculations of Costs

	Tier 1	Tier 3	Savings per year	Cost Reduction
Availability	99.67%	99.98%		
Minutes per year	525,600	525,600		
Minutes downtime per year	1734.48	105.12		
Cost per minute	\$14,800.00	\$14,800.00		
Cost per year	\$25,670,304.00	\$1,555,776.00	\$24,114,528.00	94%
Cost after 3 Years	\$77,010,912.00			

III. 3 Year Investment Outlook Calculations

	Year 1	Year 2	Year 3	Total
Cost	\$35,000,000.00	\$-	\$-	\$35,000,000.00
Benefit	\$-	\$24,114,528.00	\$24,114,528.00	\$48,229,056.00
3 year net benefits				\$13,229,056.00