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Tier III

Building a Tier III data center will result in a net profit of $13,229,056 over a three-year span. It will mitigate the ERP system outages, we have been experiencing. Our system availability will increase by .31 percent increasing efficiency and saving us money.

The key capabilities of a Tier III data center include multiple independent paths, subsystems such as control systems for the mechanical plant, start systems for engine generators, EPO controls, power sources for cooling equipment and pumps, and isolation valves (Uptime institute). Simply put, a Tier III data center combines and exceeds the features and capabilities of Tier I and Tier II data centers, but it includes redundant capacity and data center infrastructure components (Techopedia). This system will fulfill the inadequate facilities we lack in our current data center and our downtime would be reduced by 1,629 minutes per year. To further explain the change in percentage a Tier I data center has approximately 99.67 percent uptime while a Tier III data center has an uptime of about 99.82 percent (ColocationAmerica).

Investing in a Tier III data center will cost $35 million and will take one year to install. Our yearly profits after year one of installment will be $24,114,528. These profits come from the reduced downtime per year that we will save by implementing Tier III. At the end of year three our net profit will be roughly $13,229,056.

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| --- | --- | --- | --- | --- | --- | --- |
|  | Availability | Calculation |  | Minutes in one year | Downtime (min/year) | Costs of downtime at ($14,800/min) |
| Tier I | 99.67% | 1 - .9967 = .0033 | \* | 525,600 | 1,734.48 | $25,670,304 |
| Tier III | 99.98% | 1 - .9998 = .0002 | \* | 525,600 | 105.12 | $1,555,776 |
|  |  |  |  |  | **Our Savings** | $24,114,528 |

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| --- | --- | --- | --- | --- |
| 3-year Spectrum | Year 1 | Year 2 | Year 3 | Total |
| Costs | $35,000,000 | $0 | $0 | $35,000,000 |
| Profits | $0 | $24,114,528 | $24,114,528 | $48,229,056 |
|  |  |  | **3-Year Profit** | $13,229,056 |

Data Center Tier Rating Breakdown - Tier 1, 2, 3, 4 - Cla  
Colocation American Staff - https://www.colocationamerica.com/data-center/tier-standards-overview.htm

What Is a Tier 3 Data Center? - Definition from Techopedia  
https://www.techopedia.com/definition/29859/tier-3-data-center

Uptime institute LLC. (2009-2012). Data center site infrastructure tier standard: Topology. 1-7. Retrieved from uptimeinstitute.com.