To, CIO: Mart Doyle  
From, Dylan Casey  
Subject: Data Centers and Networking

We are losing $76 million every three years due to downtime of our current Tier I datacenter. Our company can decrease the amount of downtime per year by 92% and realize a net benefit of $37,460,800 over a three-year period by upgrading to a new “Tier III” datacenter. A “Tier III” datacenter will greatly increase the efficiency of our datacenter.

Implementing a Tier III datacenter can increase our uptime from 99.62% to 99.98%, and decrease our approximate downtime per year from 28.8 hours to 1.6 hours. A Tier III datacenter also offers 72 hours of power outage protection as opposed to the lack of power outage protection that we have now. Tier III datacenters also have a redundancy capability so we won’t lose data.

With a new Tier III datacenter, we can decrease the cost of downtime by $54,345,600 over a three year period. The initial cost for installation is $35 million plus the potential downtime cost of $4,262,400 for three years. Building a Tier III datacenter will give our company a net benefit of $37,460,800 over a three-year period.

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| --- | --- | --- | --- | --- |
|  | Year 1 | Year 2 | Year 3 | Total |
| **Costs of Tier 3 Datacenter:** |  |  |  |  |
| Installation | $35,000,000 |  |  | $35,000,000 |
| Tier 3 Downtime | $1,420,800 | $1,420,800 | $1,420,800 | $4,262,400 |
| **Total Cost of Tier 3 Datacenter:** |  |  |  | **$39,262,400** |
|  |  |  |  |  |
| **Original Cost of Tier 1 Downtime** |  |  |  |  |
| Tier 1 Downtime | $25,574,400 | $25,574,400 | $25,574,400 | $76,723,200 |
| **Net Benefit** |  |  |  | ***$37,460,800*** |

Tier 3 Downtime = 96 min/year \* $14,800/min = $1,420,800 /year

Tier 1 Downtime = 1728min/year \* $14,800/min = $25,574,400/year

“Data Center Standards (Tiers I-IV).”*Colocation America*

https://www.colocationamerica.com/data-center/tier-standards-overview.htm

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http://www.bmc.com/blogs/data-center-tiers-important/