Sarah Pak

 Our company has the opportunity to save $72,343,585 by upgrading our data center systems from Tier I to Tier III to maintain operations and reduce costs. With its redundant capacity components and multiple independent distribution paths, which allow for a decrease in downtime.

 In the last year we have had 10 unscheduled outages in our ERP system because of inadequate facilities. This has caused our company unable to process orders, unable to make products, and unable to ship products. Therefore, Tier III is capable of adequate capacity permanently installed, if the components were removed for any reason. The key capability of Tier III is the multiple distribution paths and only one path is needed, to serve the critical environment, at any time. Currently, with Tier I we have a 99.67% availability of 1728 minutes of downtime per year, whereas Tier III has a 99.98% availability of 95 minutes of downtime per year. Additionally, Tier III is maintainable because it is compatible to the site’s infrastructure and serves unplanned outages.

 Upgrading to Tier III will take a year and costs us $35,000,000. Within a three year period, including Tier III in our data center system, will cost us $63,781,856. However, it will have a net benefit of $13,229,056. In essence, upgrading to Tier III will give our company net benefit of $72,343,585 in downtime costs within a three year period.

Figure 1: Including upgrading year of Tier 3

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data center system | Upgrading cost | Year 1 | Year 2 | Year 3 | Total cost |
| Tier 1 | 0 | 25,670,304 | 25,670,304 | 25,670,304 | 77,010,912 |
| Tier 3 | 35,000,000 | 25,670,304 | 1,555,776 | 1,555,776 | 63,781,856 |
| Net benefit |  |  |  |  | **13,229,056** |

Figure 2: After upgrading from Tier 1 to Tier 3

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data center system | Total minutes in 3 years | Downtime | Availability  | Total downtime |
| Tier 1 | 1,576,800 | 14,800 | 99.67% | 77,010,912 |
| Tier 3 | 1,576,800 | 14,800 | 99.98% | 4,667,328 |
| Net benefits |  |  |  | **72,343,585** |

Works Cited

"Tier Standards Overview | Data Centers | Colocation America." *Colocation America*. N.p., n.d. Web. 29 Sept. 2014.

Uptime Institute Professional Services, LLC. Data Center Site Infrastructure Tier Standard Topology. New York: Uptime Institute, LLC, 2010.

"What Is a Tier 3 Data Center? at WhoIsHostingThis.com." *Who Is Hosting This: The Blog*. N.p., n.d. Web. 29 Sept. 2014.