Linh Tran – Flash research assignment 1 – Data Center

By switching from “Tier I” data center to “Tier III” data center, our company will generate over $13 million in net benefits. Tier III data center, which has N+1 redundancy meaning that the facility has what is mandatory to operate plus a backup, will help our company to increase productivity and reduce our downtime costs of over $24 million per year.

The key capability of “Tier 3” data is that it uses Concurrent Maintenance. It has N+1 Redundancy, which has redundant capacity components and multiple independent distribution paths such as power feeds, diverse network paths, UPS, and diesel generators. As a result, outages would not affect the IT processing environment. By leveraging “Tier III” data center with all the redundancy and extra active power supply, we can reduce downtime and mitigate serious operational problems, which can lead to a huge positive impact on our company’s income statement.

We will experience a total of $13,229,056 in net benefits as a result of investing in “Tier III” data center. Over a three-year period, we will pay total costs of $35,000,000 for the setting up of the new data center; however, in return, we will generate benefits of $48,229,056 by reducing the downtime minutes per year by 1629.36 minutes. Tier III data center will be an investment that will benefit us greatly moving forward.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Minutes in a year | Availability | Downtime (mins/year) | Downtime cost |
| Tier 1 | 525600 | 99.67% | 1734.48 | $25,670,304 |
| Tier 3 | 525600 | 99.98% | 105.12 | $1,555,776 |
|  |  |  | **Savings** | **$24,114,528** |
|  |  |  |  |  |
|  | Year 1 | Year 2 | Year 3 | **Total** |
| Cost | $35,000,000 | 0 | 0 | $35,000,000 |
| Benefits | 0 | $24,114,528 | $24,114,528 | $48,229,056 |
| **Net Benefits** |  |  |  | **$13,229,056** |

“Tier III vs Tier IV Data Center – What's the Difference?” Retrieved from [www.datacenters.com/news/tier-iii-vs-tier-iv-data-center-whats-the-difference](http://www.datacenters.com/news/tier-iii-vs-tier-iv-data-center-whats-the-difference).

Why to Prefer a Tier 3 Data Center? (2015, January 05). Retrieved from <https://www.rackbank.com/blog/why-to-prefer-tier-3-data-center/>

Uptime Institute Professional Services, LLC, (.nd.) “Data Center Site Infrastructure Tier Standard: Topology”