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MIS 3406: Enterprise IT Architecture

Over 3 years there will be $13,229,056 in net benefits if the company upgrades to a Tier III Data Center. A Tier III Data Center is the most cost-effective solution for small to medium businesses because it consists of multiple redundant components. By using a Tier III Data center, we can improve our availability which ensures minimal downtime and reduces our downtime costs.

The key capability of a Tier III Data Center is that it has multiple redundant components. A Tier III Data Center has a maximum of two hours of downtime on an annual basis. A Tier III Data Center ensures that all equipment is dual powered. For example, if one input fails, the other system picks up the slack. With the use of a Tier III Data Center, we can reduce the amount of downtime costs we pay by increasing our uptime availability to 99.8% from 99.67%.

With a Tier III Data Center, we would yield a net benefit of $13,229,056 over a three-year period by increasing our uptime availability. The total cost for a Tier III Data Center is $35,000,000 over three years which includes construction of the site. But this comes with a total benefit of $24,114,528 over a three-year period compared to us still using a Tier I Data Center.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Original Servers | Year 1 | Year 2 | Year 3 | Total (Per Server) | Total for all servers (1000) |
|  |  |  |  |  |  |
| Initial Cost | $8,000 | 0 | 0 | $8,000 | $8,000,000 |
| Maintenance | $2,000 | $2,000 | $2,000 | $6,000 | $6,000,000 |
| Total | $10,000 | $2,000 | $2,000 | $14,000 | $14,000,000 |
|  |  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 80 VMware  200 Original Servers | Year 1 | Year 2 | Year 3 | Total for all servers (1000) |
| Initial Cost of VMware | $1,280,000 | 0 | 0 | $1,280,000 |
| Initial Cost of Original Servers | $1,600,000 | 0 | 0 | $1,600,000 |
| Maintenance cost of VMware | $240,000 | $240,000 | $240,000 | $720,000 |
| Maintenance cost of Original Servers | $400,000 | $400,000 | $400,000 | $1,200,000 |
| Total | $3,520,000 | $640,000 | $640,000 | $4,800,000 |

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