

## **Data Centers and Networking**

Upgrading our company's data center will result in realized savings of \$13.2 million over the next three years. Just last year we experienced 10 unscheduled outages to the ERP system due to complications at our inadequate tier I data center facility. Downtime interruptions cost the organization \$25.5 million per year. I propose investing in a new tier III data center that will reduce downtime and save money.

Currently the company is operating a tier I facility that has multiple points of failure. When these failures occur, our business operations halt – eliminating order processing, manufacturing and shipping functions. The tier I data center design lacks hardware redundancy and only has a single path for power and cooling distribution. This system allows for only 99.67% availability, or downtime of 1728 minutes per year. By comparison, a tier III data center is much less susceptible to unscheduled outages with 99.98% availability, or downtime of only 94 minutes per year. With downtime costing our organization \$14,800 per minute, that comes out to a savings of \$24 million per year. According to the Uptime Institute, these improvements are accomplished in a couple interconnected ways. First, a tier III data center requires only one power and cooling source but has multiple redundant (backup) paths built in. Additionally, components are concurrently maintainable, meaning that parts can be swapped in and out of the system without shutting down the entire facility.

The project will take one year to complete with an upfront cost of \$35 million. Once the data center is completed and operational, downtime costs will not exceed \$1.4 million per year. This large upfront cost will result in a savings of approximately \$13.2 million over 3 years. Less tangible benefits include higher employee productivity and improved customer satisfaction rates. With a new data center we can save money and provide better service.

## References

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