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Data Centers and Networking

As a rapidly growing manufacturing company, we should strengthen our IT infrastructure by upgrading to a “Tier III” data center. Our “Tier I” data center has an estimated downtime of 28.8 hours per year, bringing costs to approximately \$25.6 million. A “Tier III” data center is more robust and increases uptime availability while decreasing our current costs by approximately \$24.2 million. Simply put, mission critical operations such as processing orders, making products, and shipping products is the lifeblood of our company and should be supported by at least a “Tier III” data center. In manufacturing, even a few minutes of downtime will result in thousands in lost revenue. This is only a by the numbers cost and does not factor in the loss of goodwill resulting from past, present, and future unplanned downtime.

Unlike the “Tier I” data center which meets the bare minimum infrastructure required to support our IT systems, a “Tier III” data center would help maximize performance. The “Tier III” data center would have an uptime availability of 99.98% as opposed to our “Tier I’s” 99.67%. This .31% difference decreases downtime from 1,734 minutes to 105 minutes because of “Tier III” data center’s ability to operate during maintenance. A “Tier III” data center requires capacity components to be redundant and for the computer equipment to be served by multiple distribution paths. If one source of power is disrupted, there is another source of power that will prevent the systems from facing downtime. When we perform regular maintenance with a “Tier I” data center, we have to shut down most, if not all of our site infrastructure systems. However, with a “Tier III” data center, the computer hardware operations will not be disrupted by the removal, replacement, or testing of components. This comes in stark contrast to the annual 1,440 minute requirement necessary to perform regular maintenance with a “Tier I” data center.

The primary reasons we should build a “Tier III” data center are to decrease costs and increase uptime availability. The workload of the “Tier I” data center will continue to increase as our company continues to grow. This means the average of 10 unscheduled outages to our systems per year will also climb and there is no telling when the systems will crash due to overwork. A “Tier III” data center would save our company \$24,109,200 from both unplanned and planned downtime. By investing one year and \$35,000,000 into this project, we will essentially be taking preventative measures against future problems and netting a profit of \$13,218,400. This investment will demonstrate to our clients that we are dedicated to building a reliable IT infrastructure and that their data in our systems are of utmost importance. By not having to shut down our systems, clients will have more trust in the reliability of our company. A “Tier III” data center investment will demonstrate a long-term commitment to sustainability and will factor in to our ability to contend for market share in the competitive manufacturing industry.

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