Amanda Krauth
MIS 2501: Section 01
Flash Research Assignment
Data Centers and Networking

Reducing downtime will save our company $13.2 million in the next three years by upgrading to a Tier III data center. The Tier III data center's prime feature is its redundancy permits multiple distribution paths to tolerate high availability. High availability in our data center can stimulate productivity and minimize maintenance required.

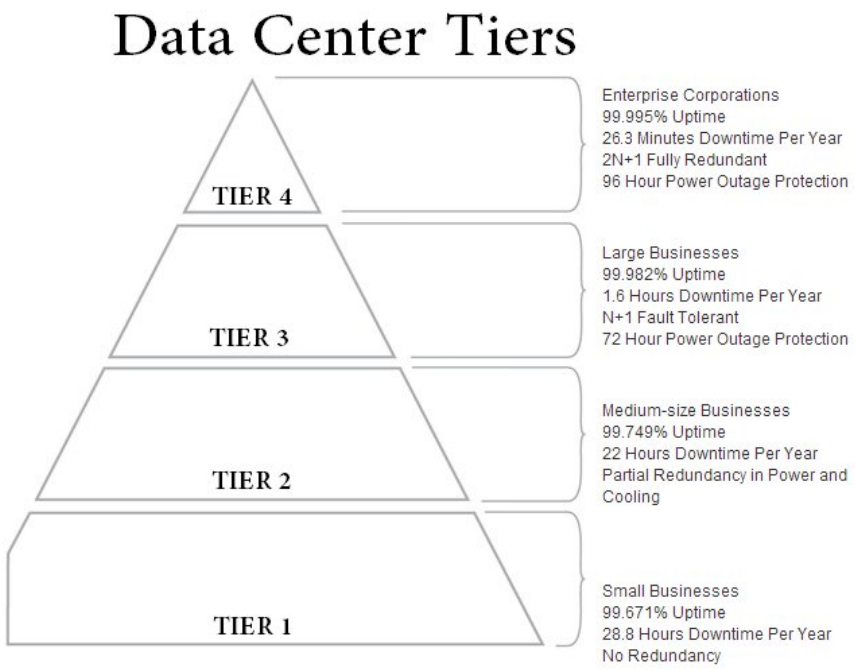
A Tier III data center has redundant capacity components with multiple independent distribution paths supporting the IT environment to reduce downtime. Our Tier I data center lacks redundancy, which is the duplication of critical components or functions of a system to increase reliability of the system in case of a backup. The Tier III data center sustains 99.98% availability with redundancy to minimize maintenance required for outages, increasing reliability. All independent distribution paths are supplied with dual power sources and are fault tolerant to maximize productivity and minimize outages. Each and every distribution path can be maintained on our own basis without negatively impacting our IT environment.

The benefits outweigh the costs over a three year period of investing $35 million to implement a Tier III data center. Total Tier I outages cost us 1,734 minutes of downtime in a year, whereas total Tier III outages cost 105 minutes per year. At a current price of $14,800 per minute of downtime, we can save $24 million annually by upgrading our data center. Our firm will have a net benefit of $13.2 million at the end of the next three years progressing to a concurrently maintainable Tier III data center.

Figure 1

	Tier 1	Tier 3
Minutes/Year	525,600	525,600
Availability	0.9967	0.9998
Downtime (minutes)	**1734.48**	**105.12**
Cost of downtime – Year 1	-	-
Year 2 Cost	$ 25,670,304.00	$ 1,555,776.00
Year 3 Cost	$ 25,670,304.00	$ 1,555,776.00
Total Downtime cost	$ 51,340,608.00	$ 3,111,552.00
Cost to Implement	$ -	$ 35,000,000.00
Total Cost	**$ 51,340,608.00**	**$ 38,111,552.00**
We Save:	$ 13,229,056.00	
Downtime (minutes)	1734.48	105.12
Outages this year	10	unknown
Downtime/outage	173.448	unknown

Figure 2



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