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                    Data Centers and Networking (revised)

        Upgrading our tier I data center to a tier III data center will grant our company a net

benefit of over $13 million over our three year investment period. Tier III data centers are

protected against outages and are prepared for unplanned failures, while tier I centers are not.

Because it is possible to perform planned and unplanned maintenance on a tier III center without

ever shutting the system down, investing in this technology will increase our system availability

to 99.98%, saving our company over $24 million a year.

        The tier III site infrastructure has capacity abilities that facilitate data backup and

decrease outages that cause data loss. This means that tier III centers have multiple independent

data distribution paths connected to the IT equipment. One distribution path is constantly serving

the IT equipment, leaving the other path open in case of an overload or failure in the active path.

Implementing the tier III data center will decrease outages, failures, and data loss due to its

increase in availability and its ability to be worked on without disruption to the system

environment.

        Our net benefit after implementing the tier III data center will exceed $13 million.

Although building a tier III data center will take one year from start to completion and will cost

$35,000,000, the upgrade decreases our annual downtime to 105.1 minutes, gaining our company

a benefit of over $48 million.

<u>Money saved due to decrease in downtime:</u>
(365 days) (24 hour) (60 minutes) = 525,600 minutes in a year.

TIER I (current): At 99.67% availability, the system is down for 1,734.48 minutes a year (525,600 minutes *x* .33% = 1,734). 1,734.48 minutes *x* $14,800 = **$25,670,304.**

TIER III: At 99.98% availability, the system is down for 105.12 minutes a year (525,600 minutes *x* .02% = 105.12). 105.12 minutes *x* $14,800 = **1,555,776.**

<u>Cost and benefit over three year investment period:</u>

	Year 1	Year 2	Year 3	Total
Cost ($)	35,000,000	0	0	35,000,000
Benefit ($)	0	24,114,528	24,114,528	48,229,056
Net Benefit ($)				**13,229056**

<u>Sources:</u>
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