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### Data Centers and Networking

In the past year we experienced 10 power outages to our ERP system due to our poor Tier I datacenter. Upgrading the data center to Tier III will reduce our downtime by adding redundancy. Redundant components will back up our systems in case of emergencies, allowing us to fix problems without shutting servers down. Incorporating redundant features will gain us a three year net benefit of \$13.2 million.

The key to upgrading our facility is adding redundancy. As a Tier I facility, we have a single distribution path, an IT system space, and an engine generator used to keep systems online for extended power outages (Uips). We also require a full system shutdown for repairs or updates (Uips). The Tier III data center includes multiple distribution paths, that allow the system to switch to another path in case of failure of one, and requires all IT equipment to be dual powered (Uips). The Teir III datacenter also allows devices and components to be removed and replaced without disruption to services (Uips). This also supplies us with backups in case of emergencies that cause us to shut down. Additionally by incorporating a private cloud service that places our servers into a data center, we create storage and backup devices to internal staff or clients for their own applications and storage solutions (Markus).

We gain a three year net benefit of \$13.2 million by adding redundancy to our ERP system. This will cost us \$35 million but save us \$24 million a year. Compared to Tier I datacenter we reduce our downtime cost of \$25.7 million to \$1.6 million a year. This is an important update that will benefit the company greatly.

### Bibliography

Kanwar, Deepak. "The Cost of Downtime | The Zenoss Blog." The Zenoss Blog The Cost of Downtime Comments. Zenoss, 27 June 2013. Web. 25 Jan. 2015.

Markus, David. "How to Reduce IT System Downtime in Your Business." SmartCompany.com.au. SmartCompany, 09 Jan. 2013. Web. 25 Jan. 2015.

Uips. Uptime Institute Data Center Site Infrastructure Tier Standard: Topology (n.d.): n. pag. Web.

	Min. in a Year	Availibility	Downtime (min/year)	Downtime Cost
Tier I	\$525,600	99.67	1734.48	\$25,670,304
Tier III	\$525,600	99.98	105.12	<u>\$1,555,776</u>
<b>Total</b>				\$24,114,526

	Year 1	Year 2	Year 3	<b>Total</b>
Cost	\$35mil	\$0	\$0	\$35,000,000
Benefit	0	\$24,114,526	\$24,114,526	<u>\$48,229,056</u>
<b>Total</b>				\$13,229,056