

Storage Economics Engagement Customer Summary

INDUSTRY: **Telecom**
 REGION: **APAC**
 BUSINESS SIZE: **Enterprise**



TRANSFORM VIRTUALIZATION ECONOMICS RELIABLE TRUSTED INNOVATE INFO
 TION GLOBAL CHANGE INTELLIGENT TECHNOLOGY SERVICES VALUE INSIGHT
 PORTUNITY SOCIAL INFRASTRUCTURE INTEGRATE ANALYZE DISCOVER COMPET

USE CASE

Executive Summary

HDS helped identify important costs in the XYZ Inc. storage infrastructure, defined a total cost of ownership per terabyte (TCO/TB) baseline model and proposed ideas to reduce the total cost of storage ownership. XYZ Inc. manages 1.2PB of raw capacity and has a current growth rate of 30%.

HDS Proposed Solution

- Managed service utility.
 - Provider manages the storage onsite or offsite.
- Capacity on demand.
 - XYZ Inc. still manages storage and pays for power and cooling.
- Technical refresh of older arrays without changing architecture.
- Vendor and array consolidation with dynamic virtualization, thin provisioning, tier allocation, and reclamation.
 - Keep newer arrays and virtualize them.

- Common single point of management.
 - One storage solution for all data (FC, iSCSI, NAS, Tier 1-3, archive, backup disk).

Savings after XYZ Inc. implementation

- TCO/TB reduced from US\$5,851 down to \$ 1,752 in year 4.
- XYZ Inc. saves US\$8,963,586 at the end of 4 years.

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COMPARATIVE TCO

	Current	Year 1	Year 2	Year 3	Year 4
New Architecture(s)	0	US\$3,427	US\$2,816	US\$1,915	US\$1,752
Business as usual	US\$17,574	US\$5,075	US\$3,756	US\$2,857	US\$1,212

SAVINGS SUMMARY

Investment	0	Labor, migrate	0
4-year savings	US\$8,963,586	Capex avoidance	US\$478,444
Net present value of savings	US\$7,056,990	Environmental	US\$754,160
Payback term	< 1 Month	Maintenance	US\$7,730,983
Reclaimed disk	95TB	Total	US\$8,963,586

Key Financial Metrics

Category	Key Financial Metrics
Investment	0 (total 4-years investment)
Estimated payback period	< 1 month(s) after implementation
Savings	US\$8,986,221 (total 4-year savings) US\$7,056,990 (Net present value)
Internal rate of return (IRR)	10%
Return on investment (ROI)	N/A

Company Information

Company name	XYZ Inc.
Region	APAC
The country of company headquarters	Malaysia
Company size (employees #)	CONFIDENTIAL
Company size (revenue \$)	CONFIDENTIAL
Industry	Telecom

Business Information (before HDS engagement)

Business overview	CONFIDENTIAL
Corporate vision	CONFIDENTIAL
Corporate goals	<p>Economical</p> <ul style="list-style-type: none"> ■ Capex reduction. ■ Opex reduction. <hr/> <p>Technical</p> <ul style="list-style-type: none"> ■ Manage 30% data growth.
Cost sensitivities:	<ul style="list-style-type: none"> ■ Depreciation expense of hardware and software. ■ Cost of waste. ■ Hardware maintenance. ■ Software maintenance. ■ Power and cooling costs. ■ Floor space in the data center. ■ Backup. ■ Migrate. ■ Common costs used by other telecoms but not included in this XYZ Inc. list. <ul style="list-style-type: none"> ■ Storage management labor. ■ Backup management labor. ■ Cost of copies. ■ Cost of outage (scheduled and unscheduled). ■ Storage area network (SAN). ■ Local and remote data circuits. ■ Migration of data from array to array.

Technical Information (before HDS engagement)

Capacity

- Raw — 1.2PB.
- Usable — 80 GB.
- Allocated — 480GB.
- Written — 192GB.

Growth rate of data and storage over the last few years is 30%.

Average age of current storage assets is 2.5 years.

TCO Baseline Assumptions

- 3-year depreciation.
- Total actual maintenance costs for all 4 vendors — US\$2 million per year.
- Migration time is 2-3 months per array at a cost of US\$4,994 per terabyte.
- Power costs are US\$.10 per kilowatt hour.
- Floor space is US\$33.29 per square meter per month.

- Allocation rate of 70%.
- Written-to rate is 40%.
- Allocation of 800TB is between 3 tiers — T1 is 25%, T2 is 50%, and T3 is 25% of usable capacity.

Solution and Services Information (our products and solutions deployed)

- Managed service utility.
 - Provider manages the storage onsite or offsite.
 - All labor, administration and technical refresh is done with this contract.
- Capacity on demand.
 - Minimum commitment levels required.
 - XYZ Inc. still manages storage and pays for power and cooling.
- Technical refresh of older arrays without changing the architecture.
 - Keep tier islands, have multiple vendors.
 - Current levels of inefficiencies continue.
- Vendor and array consolidation with virtualization, thin provisioning, and dynamic tiers.
 - Retain newer arrays but they will be virtualized.
 - Common single point of management.
 - One storage solution for all data (FC, iSCSI, NAS, Tier 1-3, archive, and backup disk).

Resulting Benefits

CASH INVESTMENT				
Savings	Year 1	Year 2	Year 3	Year 4
Environmental savings	US\$113,472	US\$153,352	US\$207,248	US\$280,088
Purchase avoidance – tiered storage	0	0	0	0
Storage area management savings	0	0	0	0
Reclamation – virtualization	0	0	0	0
Reclamation – thin provisioning	US\$478,444	0	0	0
Hardware and software maintenance savings	US\$1,471,617	US\$1,997,670	US\$2,130,848	US\$2,130,848
Data re-mastering – migration	0	0	0	0
Sum of Savings	US\$2,063,533	US\$2,151,022	US\$2,338,096	US\$2,410,936
Net cash flow	US\$2,063,533	US\$2,151,022	US\$2,338,096	US\$2,410,936
Cumulative cash flow	US\$2,063,533	US\$4,214,555	US\$6,552,650	US\$8,963,586

12% capacity reclaimed

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