

## Storage Economics Engagement Customer Summary

INDUSTRY: IT services  
REGION: Americas  
BUSINESS SIZE: Enterprise



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

### Executive Summary

**XYZ Inc. has asked HDS to help identify, measure, and eventually reduce the total cost of data ownership. A total cost of ownership (TCO) baseline assessment has been completed to help isolate specific problem cost areas and aid the implementation of new strategic plans for improvement. The current storage configuration employed by XYZ Inc. has 13.2PB of raw capacity and a 29% annual data growth rate.**

In reviewing the XYZ Inc. environment, Hitachi took many parameters into consideration. The analysis leverages actual XYZ Inc. numbers along with empirical Industry data to calculate potential savings that XYZ Inc. can achieve with the proposed storage architecture refresh.

The HDS solution includes:

- Dynamic tiered storage
- Technology refresh of older disk arrays
- Improving capacity utilization through Hitachi Dynamic Provisioning (thin provisioning)

XYZ Inc. can save a total of US\$140,639,208 by updating their current storage architecture to the proposed Hitachi solution. This solution will reduce cost/terabytes/year from the original US\$1616.46 down to US\$1041.73.

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## Key Financial Metrics

Category	Key Financial Metrics
Investment	0 (total 5-year investment)
Estimated Payback Period	N/A
Savings	US\$140,639,208 (total 5-year savings)
Internal Rate of Return (IRR)	N/A
Return on Investment (ROI)	N/A (Savings/# of years/investment)

## Company Information

Company name	XYZ City
Region	Americas
The country of company headquarters	United States
Company size (employees #)	98,000
Company size (revenue \$)	\$16 billion
Industry	IT services

## Business Information (before HDS engagement)

Business overview	<b>CONFIDENTIAL</b>
Corporate vision	<b>CONFIDENTIAL</b>
Corporate goals	<b>Economical</b> <ul style="list-style-type: none"> <li>■ Capex reduction.</li> <li>■ Opex reduction.</li> </ul> <b>Technical</b> <ul style="list-style-type: none"> <li>■ Manage 29% data growth.</li> </ul>
Challenges	<b>Data growth %</b> <ul style="list-style-type: none"> <li>■ Underutilization of assets.</li> <li>■ Labor issue.</li> <li>■ Performance issues.</li> <li>■ Migration disruption.</li> </ul>
Cost sensitivities	NA

## Technical Information (before HDS engagement)

### EXISTING STORAGE CONFIGURATION (TB)

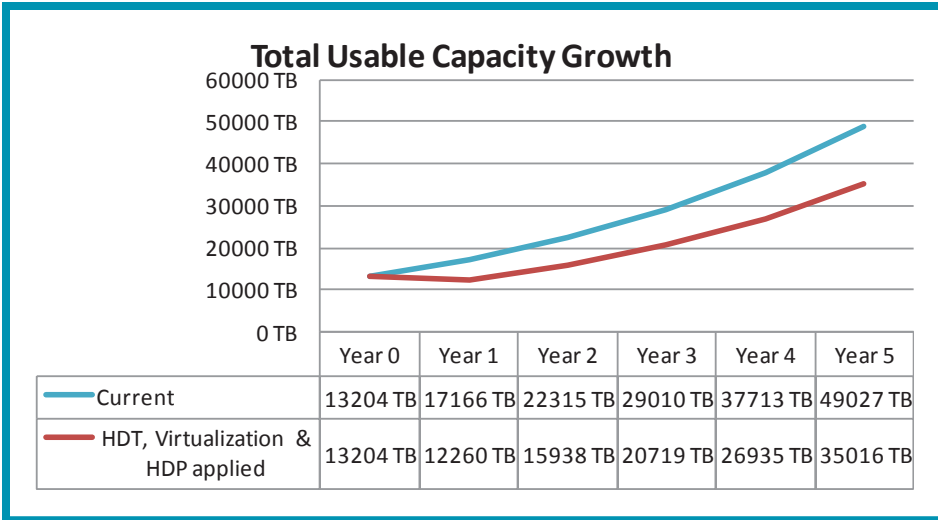
System	Tier	Available	Allocated
USP V	1	181,759	232,516
USP V	1	112,437	153,660
AMS 1000	2	48,965	69,756
AMS 2500	2	76,016	114,031
AMS 2500	2	57,910	112,176

### TIER BREAKDOWN SUMMARY (TB)

Age	Relative	Tier 1 Enterprise		Tier 2 Midrange		Tier 3 Midrange		Tier 4 NAS	
		Available	Allocated	Available	Allocated	Available	Allocated	Available	Allocated
6+ years	6 %	400	333	203	172	54	42	66	38
5 years	7 %	520	432	264	223	70	55	86	49
4 years	10 %	676	562	343	290	91	72	112	64
3 years	13 %	879	731	446	377	119	93	146	84
2 years	16 %	1,143	950	580	491	154	121	190	109
1 year	21 %	1,486	1,235	755	638	200	157	247	141
0 year	28 %	1,932	1,606	981	829	261	204	321	184
Totals	100 %	7,036	5,849	3,573	3,021	949	745	1,168	668
<b>Number of systems:</b>		<b>93</b>		<b>149</b>		<b>27</b>		<b>92</b>	

### TIER DETAIL

	Tier 0	Tier 1	Tier 2	Tier 3	Tier 4
Technology	SSD/Ent.	FC/Ent.	FC/Mid.	SATA/Mid.	NAS
Available capacity (TB)		7,036	3,573	949	1 168
Allocated capacity (TB)		5,849	3,021	745	668
Data (TB) (50%)		2,924	1,510	372	334
Current data distribution		57%	29%	7%	9%
Price (US\$/GB)	55	8	4	1.50	5
Yearly price erosion	25 %	10%	10%	15%	10%
Useful life (years)	5	5	5	5	5
Prepaid maintenance (years)	3	3	3	3	3
Current growth rate		30%	30%	30%	30%



## Solution and Services Information (our products and solutions deployed)

### Capex:

#### Virtualizing current estate will:

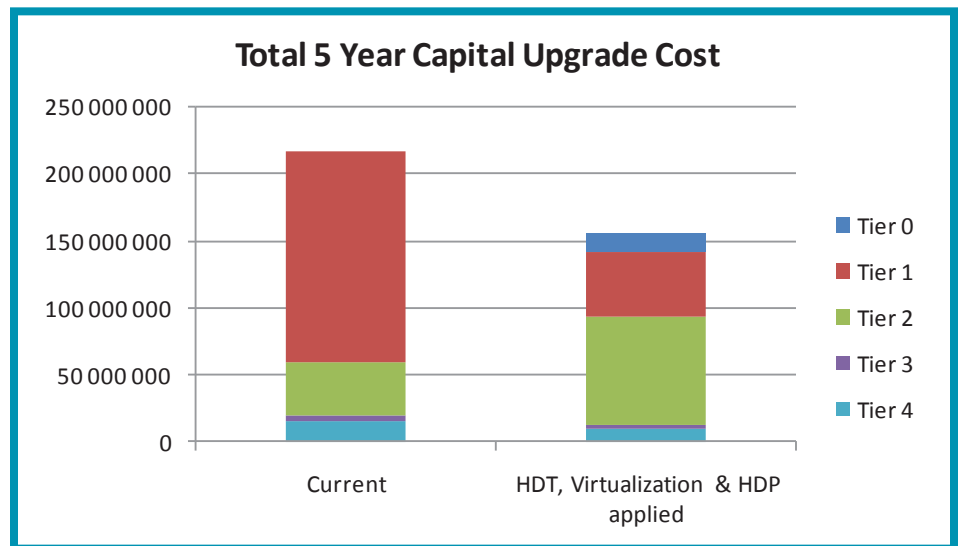
- Implement proposed technology on existing estate.
- Reduce risk due to no “rip and replace”.
- Manage complete environment as 1 entity – 1 set of tools.
- Increased efficiency – Reduced cost.

#### Reduced installed capacity will:

- Reduce hardware acquisition cost (growth and replacements).
- Reduce software acquisition cost (growth and replacements).

#### Hitachi Dynamic Tiering will:

- Move frequently accessed data to highest tiers.
- Move less-frequently accessed data to lower tiers.
- Allocate capacity from single pools.



**Opex:**

**Less installed capacity will:**

- Reduce software licence cost.
- Reduce hardware maintenance cost.
- Reduce power, cooling, and floor space requirements.

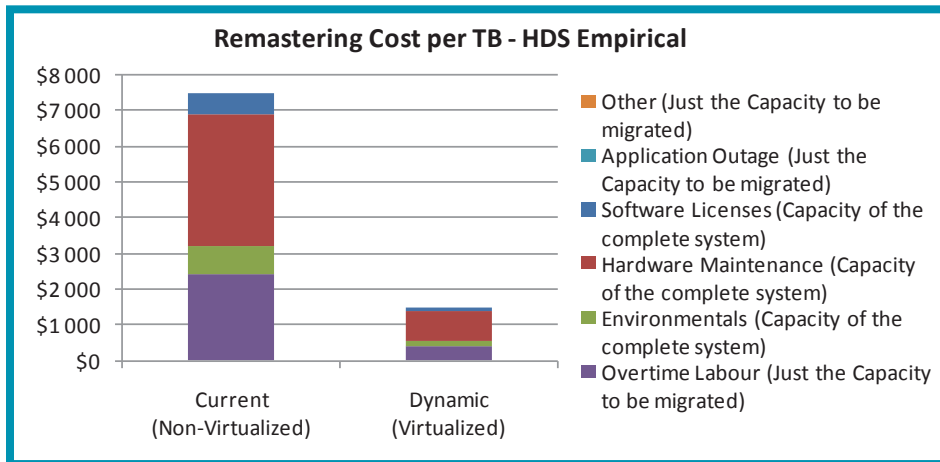
**Retiering to lower tiers (HDT) will:**

- Reduce software licence cost.
- Reduce hardware maintenance cost.
- Reduce power, cooling, and floor space requirements.

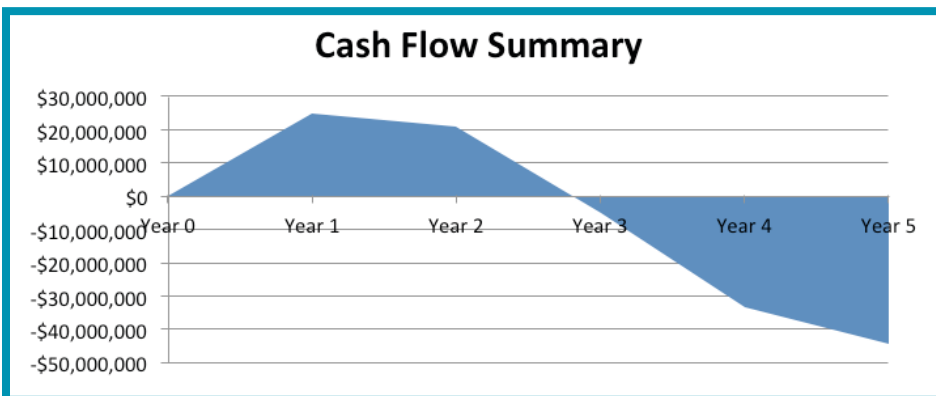
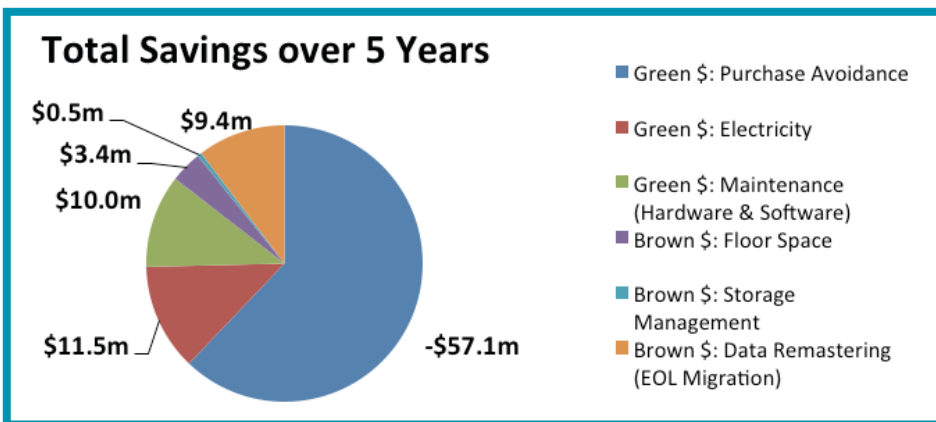
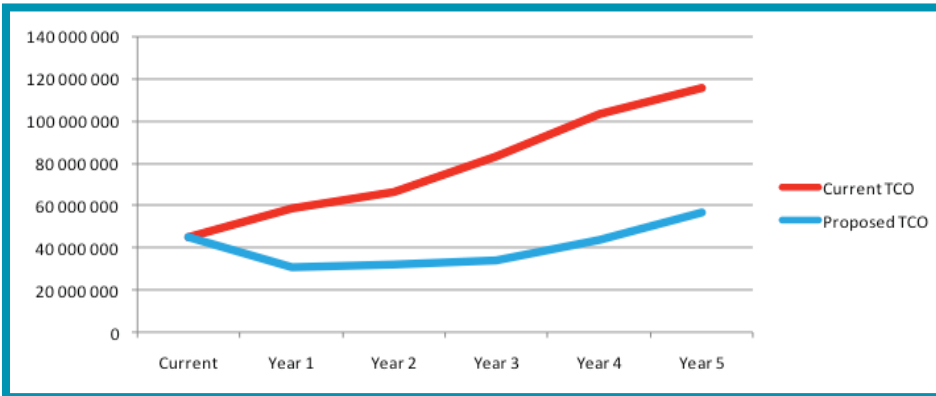
**Volumes can be replaced without any required downtime for the application:**

- Reduced migration project time.

- Reduced time with parallel infrastructure.
  - Hardware maintenance.
  - Software licences.
  - Power, cooling, and floor space requirements.
  - No extra hardware or software required.
- Volume movement performed by storage management:
  - No requirement for other personnel:
    - Server management.
    - Database administrator.
    - Application management.
  - Can be performed during normal operation
    - No need for overtime.



## Resulting Benefits



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