

Il Mondo dei Partner
INNOVARE E CRESCERE. INSIEME **2006**
Technical World

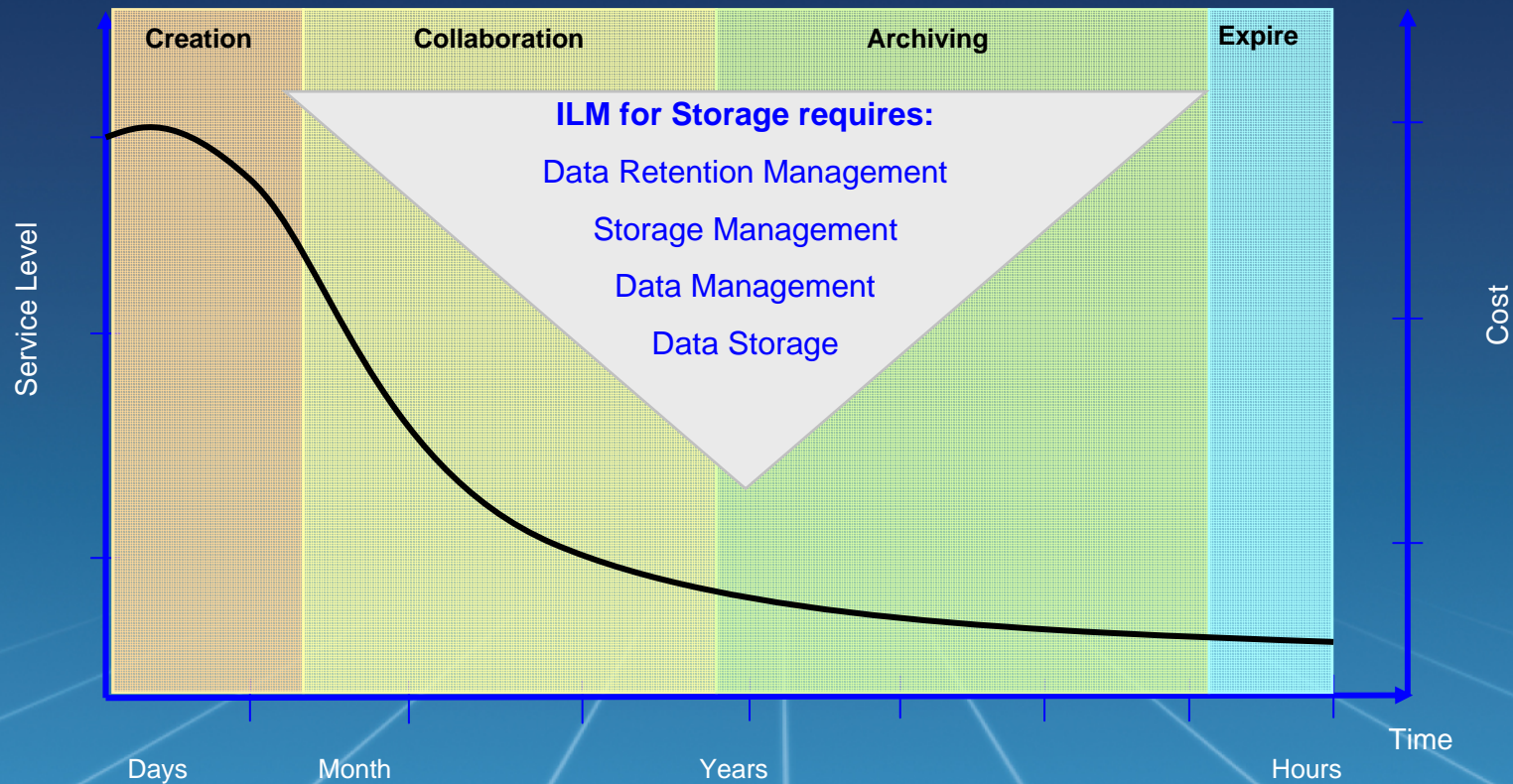
ILM (Information Lifecycle Management)

DR550

Stefano Tirasso

Information Lifecycle Management

The processes of managing business information and data throughout its lifecycle from *conception* until *disposal* - aligning the **value of information / data** to the **most appropriate and cost effective Infrastructure** throughout the lifecycle.



Definitions and Concepts

IBM Recommended Approach for Data Management



1 Classify and Rationalize (cont.)

Capture

Does data support your business?

- Identify inappropriate files
- Enforce Usage Quotas

Can you see all of your data?



- Identify duplicate files
- Identify usage violations

Is data being disposed properly?

- Obsolete files unreferenced many years
- Orphan files of users no longer in company

Disposal

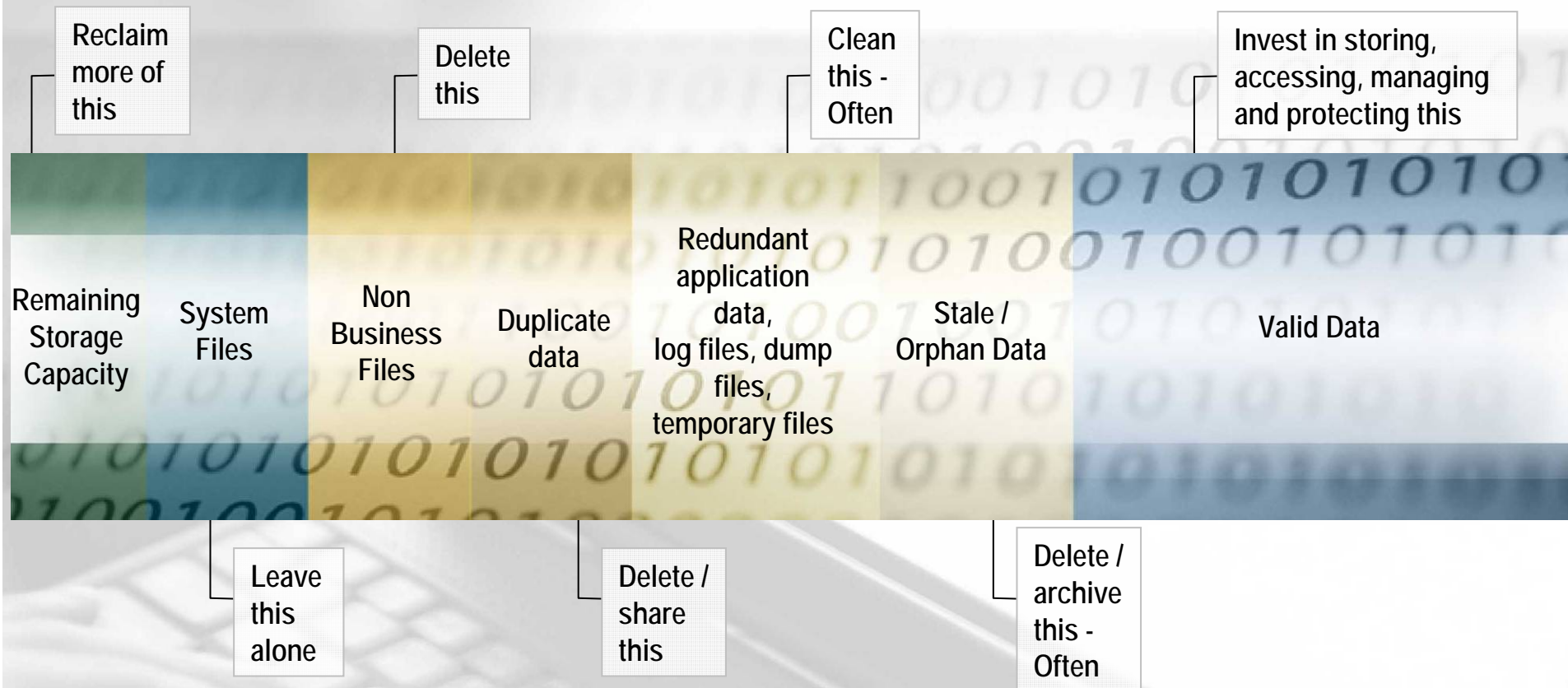
OBSOLETE

IBM's Enabling Technologies

TotalStorage Productivity Center for Data

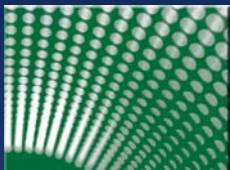


For aiding in Step 1.) Data Classification and Rationalization

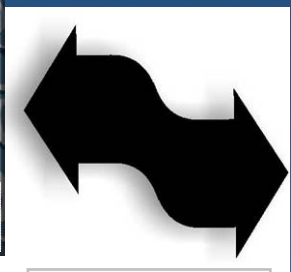
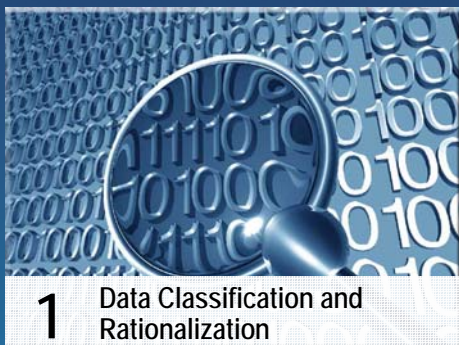


Definitions and Concepts

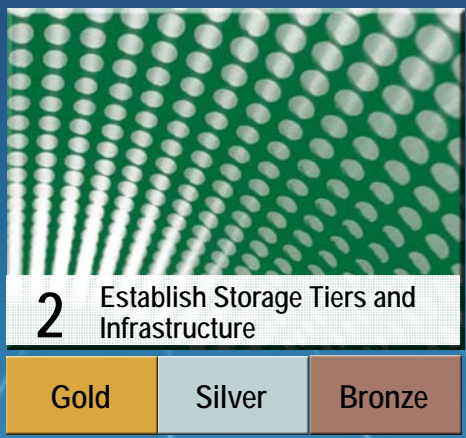
IBM Recommended Approach for Data Management



2 Establish Storage Tiers



Match tiers of storage to cost points and service levels required



IBM's Enabling Technologies

TotalStorage Disk Lines and Corresponding Service Levels



For aiding in Step 2.) Establish Storage Tiers and Infrastructure

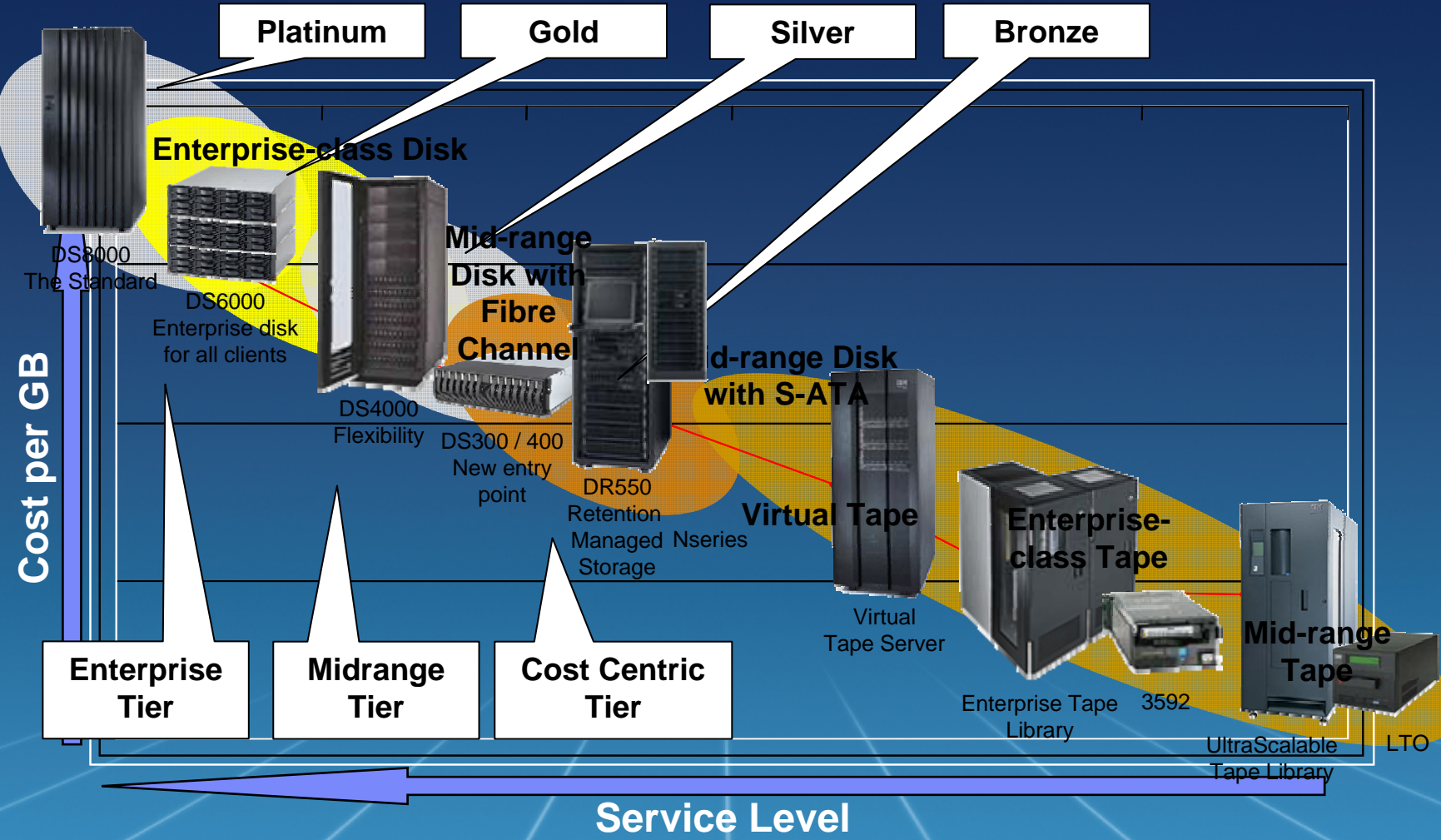
	Gold Class
	Silver Class
	Bronze Class



zSeries	iSeries	UNIX Linux on zSeries Linux on POWER	Windows Linux x86 (Intel/AMD)
DS8000			
DS6000		DS4000 FC	
		DS4000 SATA	
		N3000/5000 Filer	
		DS400 SCSI	
		DS300 iSCSI	
		LTO Tape	
3592 Tape			

Reference Conceptual Architecture

Data Management/Tiered Storage Management



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ILM Characteristic of DR550

Overview of DR550



- WORM Protection
- Highavailability Option
- Fast Access
- Integrity Check
- Data refresh and Migration
- Encryption
- Flexible API



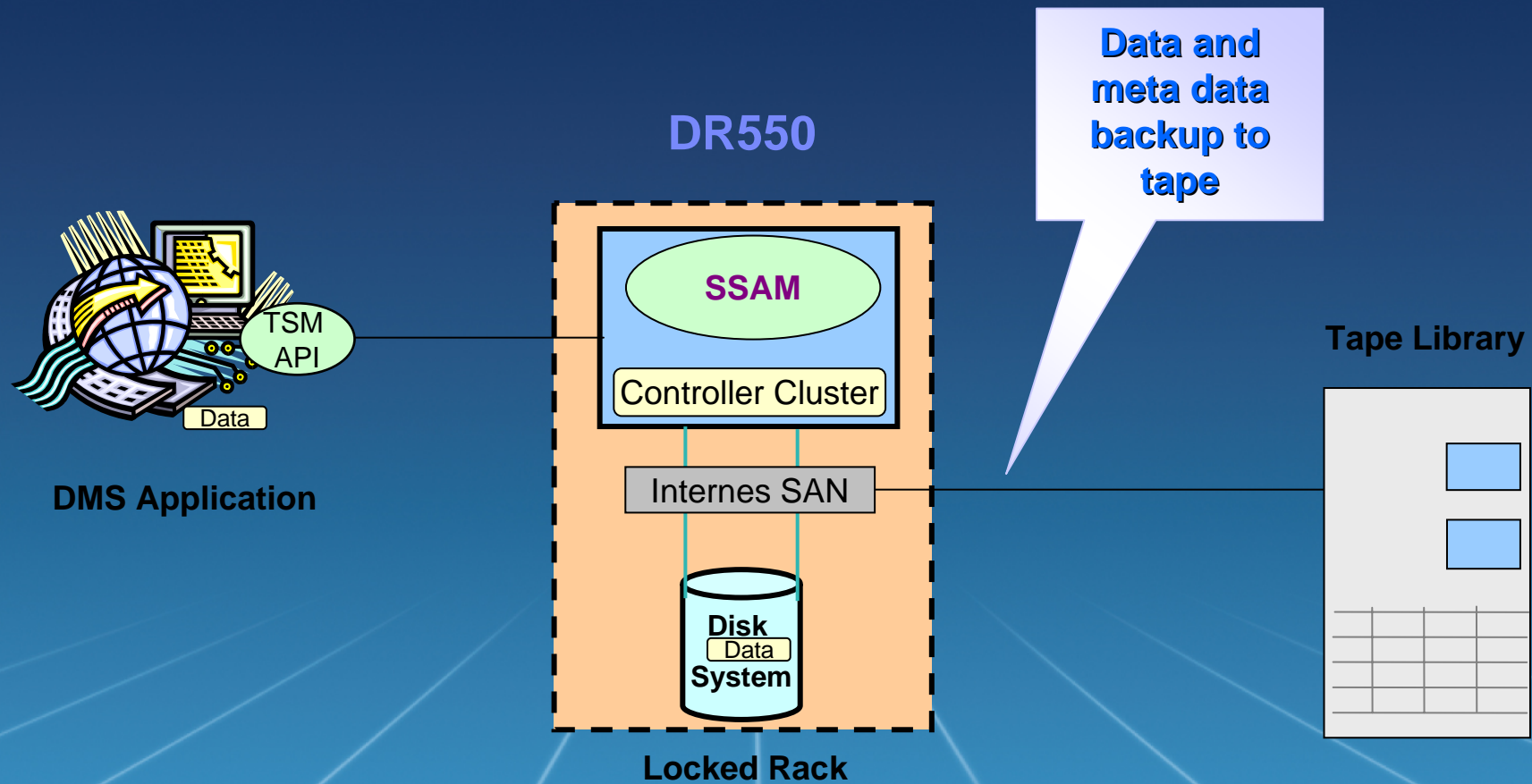
- Tiered Storage is the most efficient and cost effective solution
- Migration (DMS independent) is build in.
- Support for 100s' of devices

Backup to Tape

Provides fast data access from disk and data protection on tape

Backup data and meta data to tape lowers the cost

- tape copy is less expensive and does not cost license

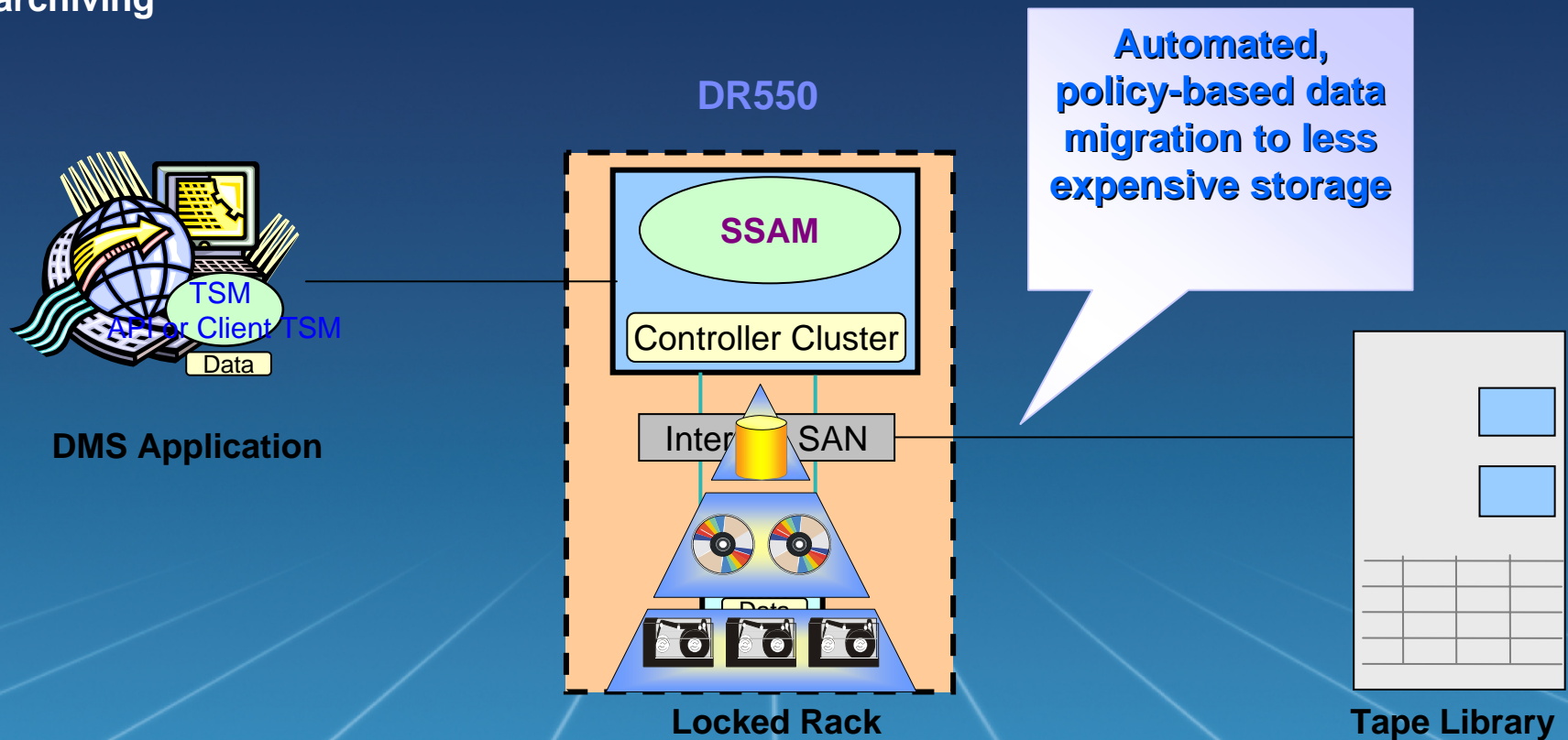


Tiered Storage

Tiered Storage allows to migration less valuable data to less cost-intensive storage technology.

- True ILM Solution allowing almost unlimited capacity (disk + tape)

Independent study of data mobility group proves that disk / combination is less expensive for archiving



Tiered Storage and TCO

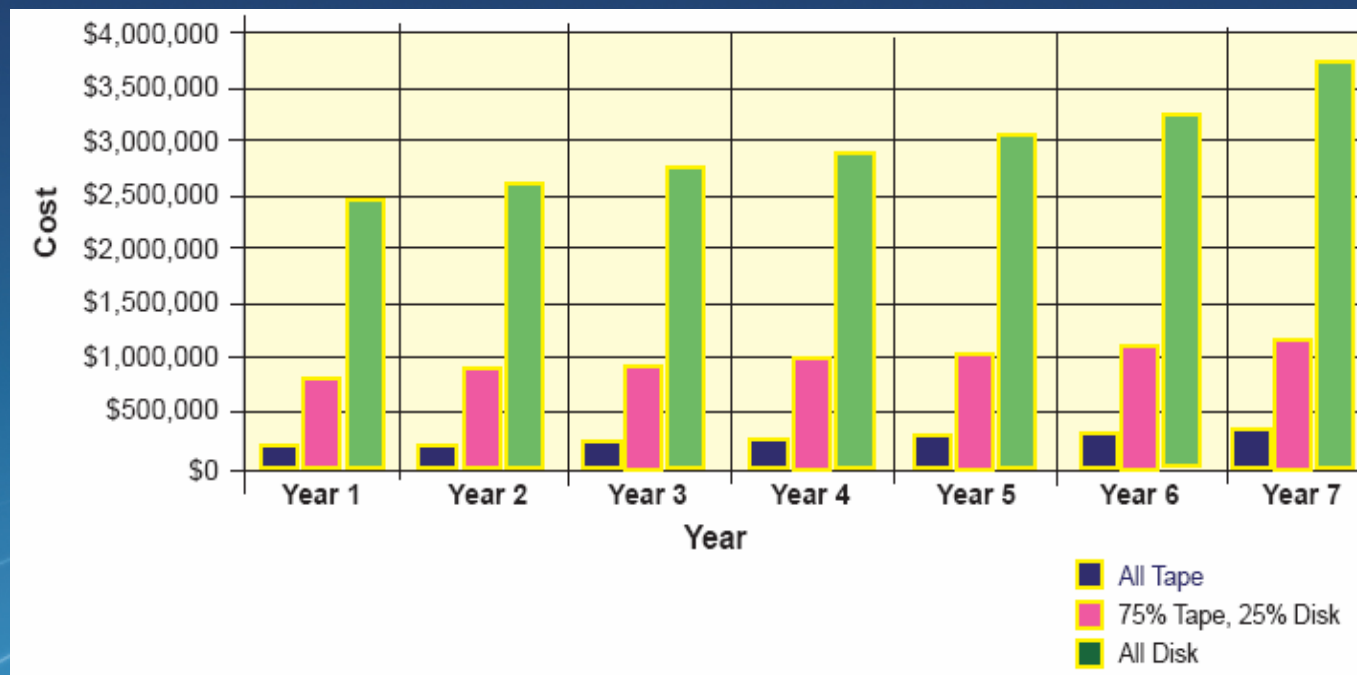
Find below summary of TCO study of DataMobility Group

Following cost items have been considered

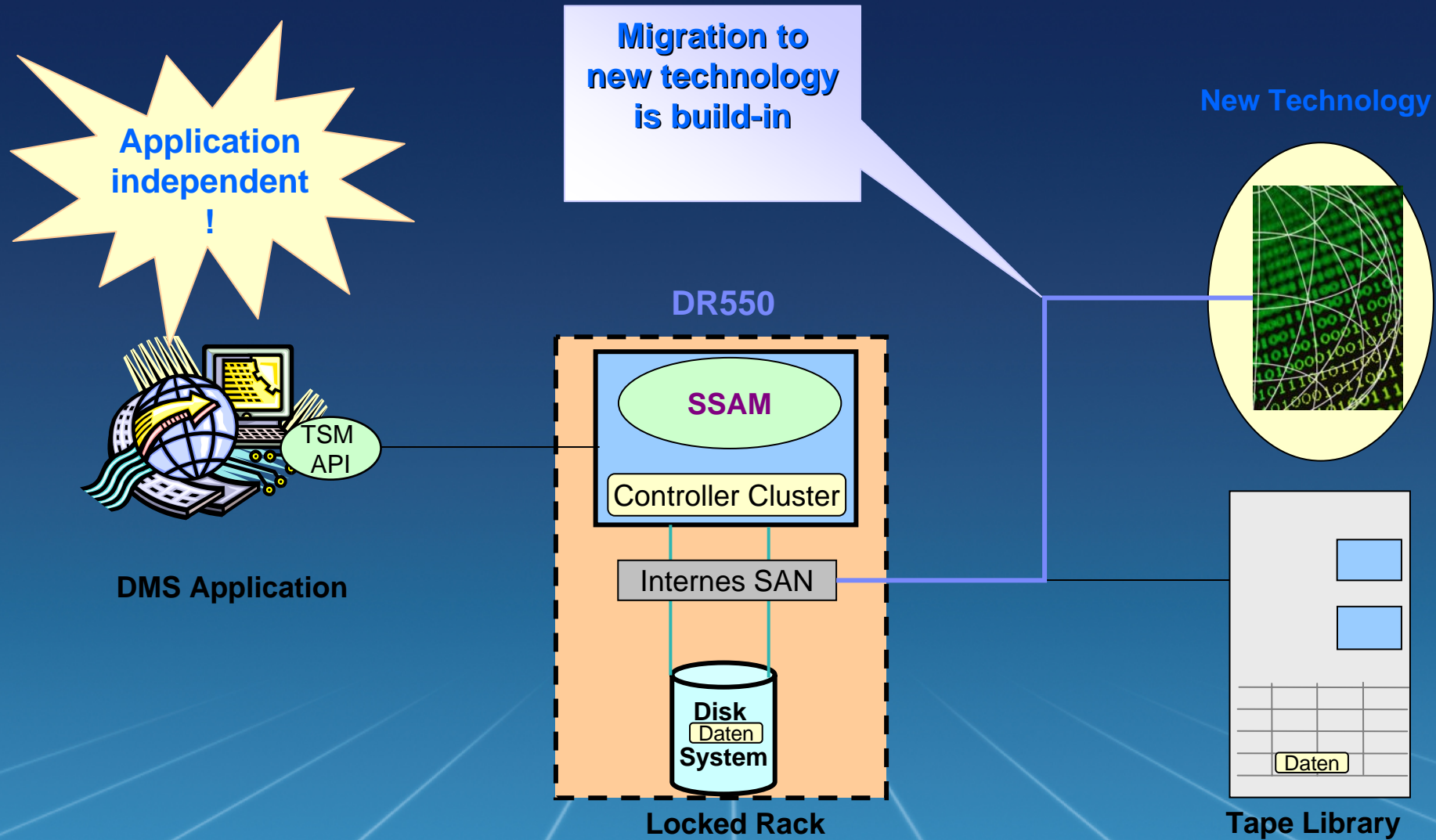
- Initial purchase, Power consumption, Floor space, Management and Maintenance, Upgrade and Scalability costs, Data Migration Costs

Assumptions:

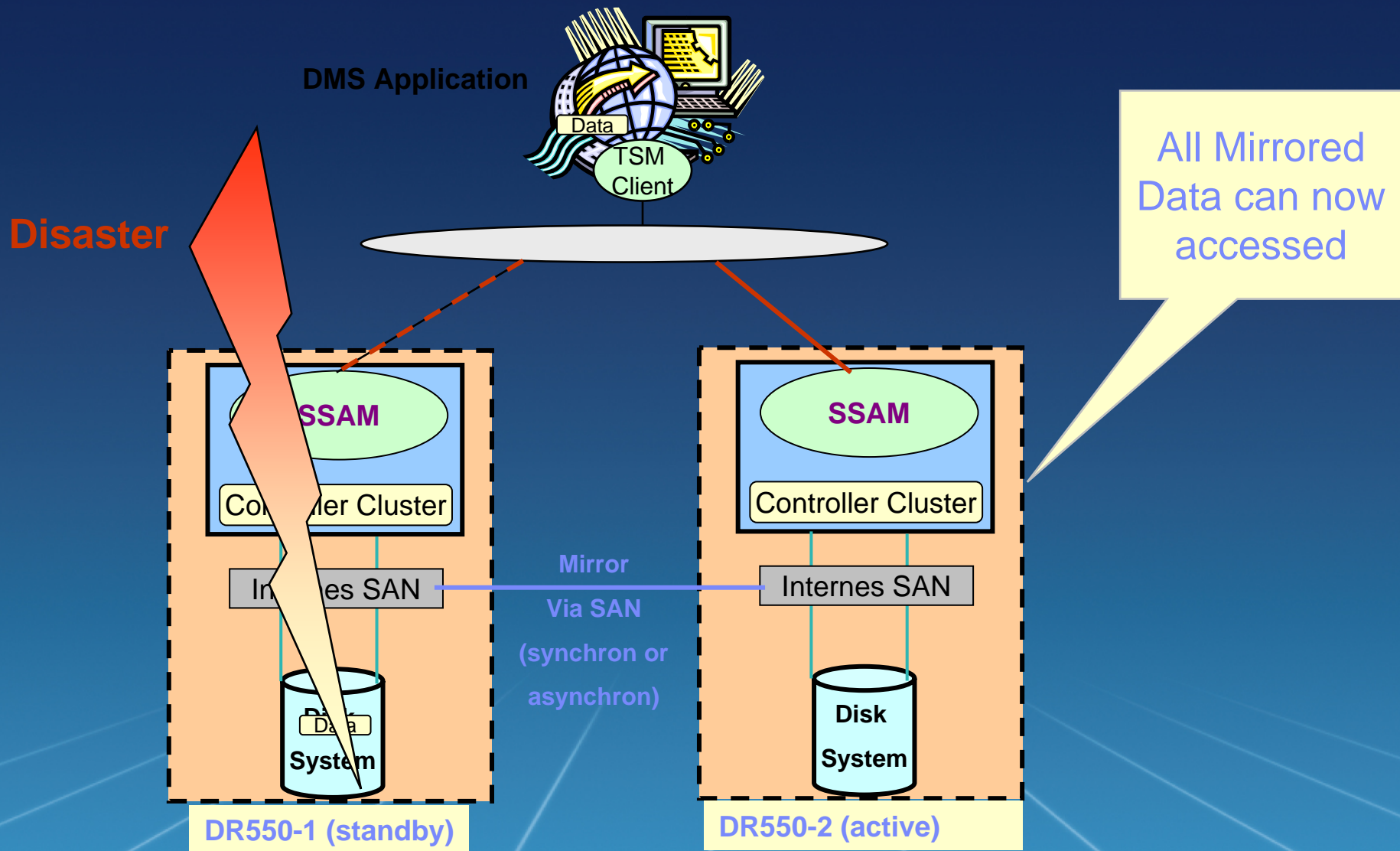
- Initial Storage Requirement – 125 TB, Annual Growth Rate – 20%
- Average Tape Utilization – 85 %, Average Disk Utilization – 70%



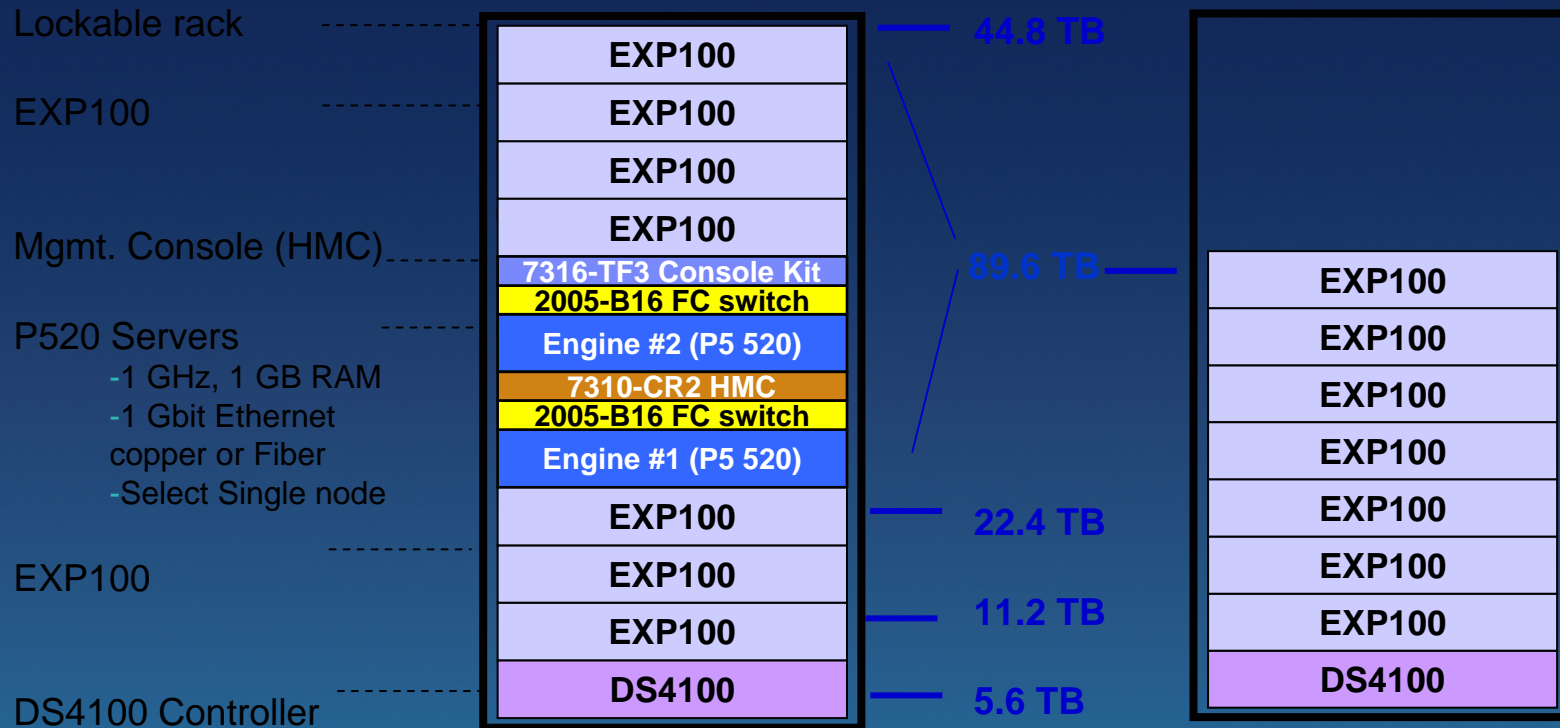
Data Migration to new Technology



Disaster Protection with Data Mirroring



DR550 System Configuration Overview



Hardware Details

HACMP in Hotstandby Mode with two p520

P520+ with dual Processor

DS4100 configured Raid 12+P+S

Copper / Fibre 1-GB Ethernet Adapters and 10/100 available for customer use

Software Details

AIX 5.3, HACMP 5.3

SSAM (TSM for DR version 5.3.2)

TSM DB and Pools on EXP100

DS4000 Storage Manager Client Version 9.65

Special version for DR prevents LUN deletion

IBM System Storage DR550 Models and Disk Capacities

Availability	Engines	Configurations (Raw TB)				
Now	Express	1.1	3.9	6.7		
Now	Single Engine	5.6	11.2			
Now	Dual Engine	5.6	11.2	22.4	44.8	89.6

Expandable

Based on SATA Disk Drive Technology

IBM SystemStorage Data Retention 550 Express

pSeries Server with internal SCSI RAID disks (1.1 TB raw)

- Extendable to 2.8 TB and 5.3 TB through DS4000 system
- SSAM and AIX pre-installed
- 2 x Gigabit Ethernet-SX connection copper or fiber
- Inclusive Management console with Keyboard and Monitor and 2005-B16
- Rack 7014-S25 can be ordered optional

Same Features & Functions as DR550

- SSAM is the same version
- Tape and other device attachment for backup and migration
- Encryption supported

Metro Mirroring not supported

- Upgrade to DR550 Single node possible (via RPQ)

Your Advantage

- Price-effective entry model with full functionality



DR550 Mirroring Overview

Business Continuance solution with two DR550

- Distributed across different locations
- Based on DS4000 Enhanced Remote Mirroring
- Active / Standby relation

Metro Mirror

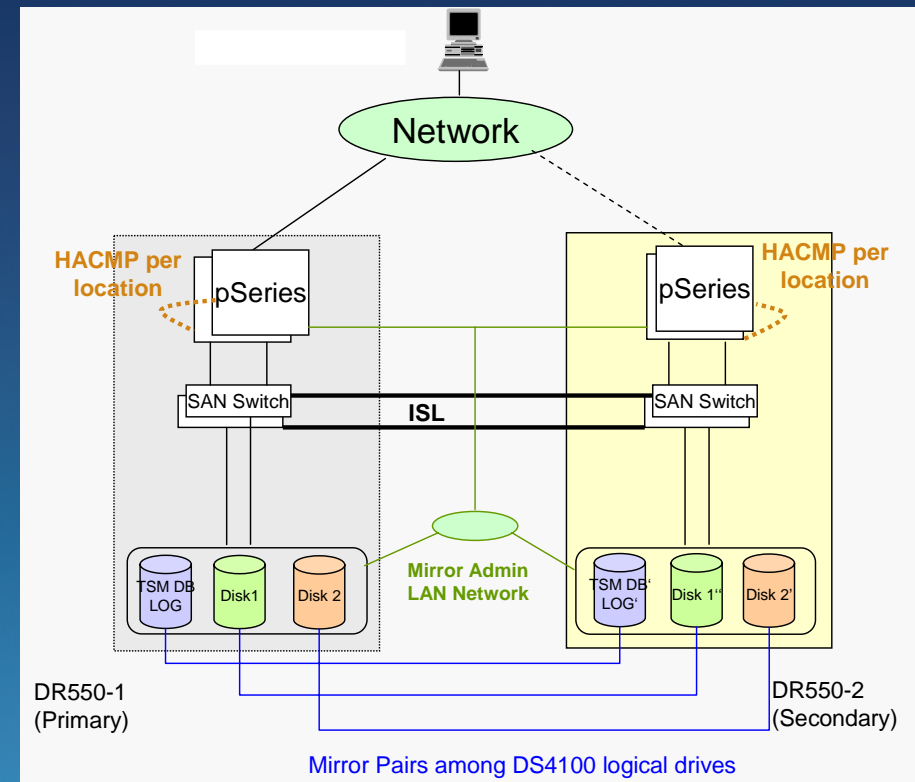
- Synchronous Mirroring via SAN
- Max. Distance without repeater is 10 km
 - Up to 100 km with Repeater

Global Mirror

- Asynchronous Mirroring via SAN
- Expands distance to over 100 km

Tape Attachment is supported

- Backup and Migration enabled

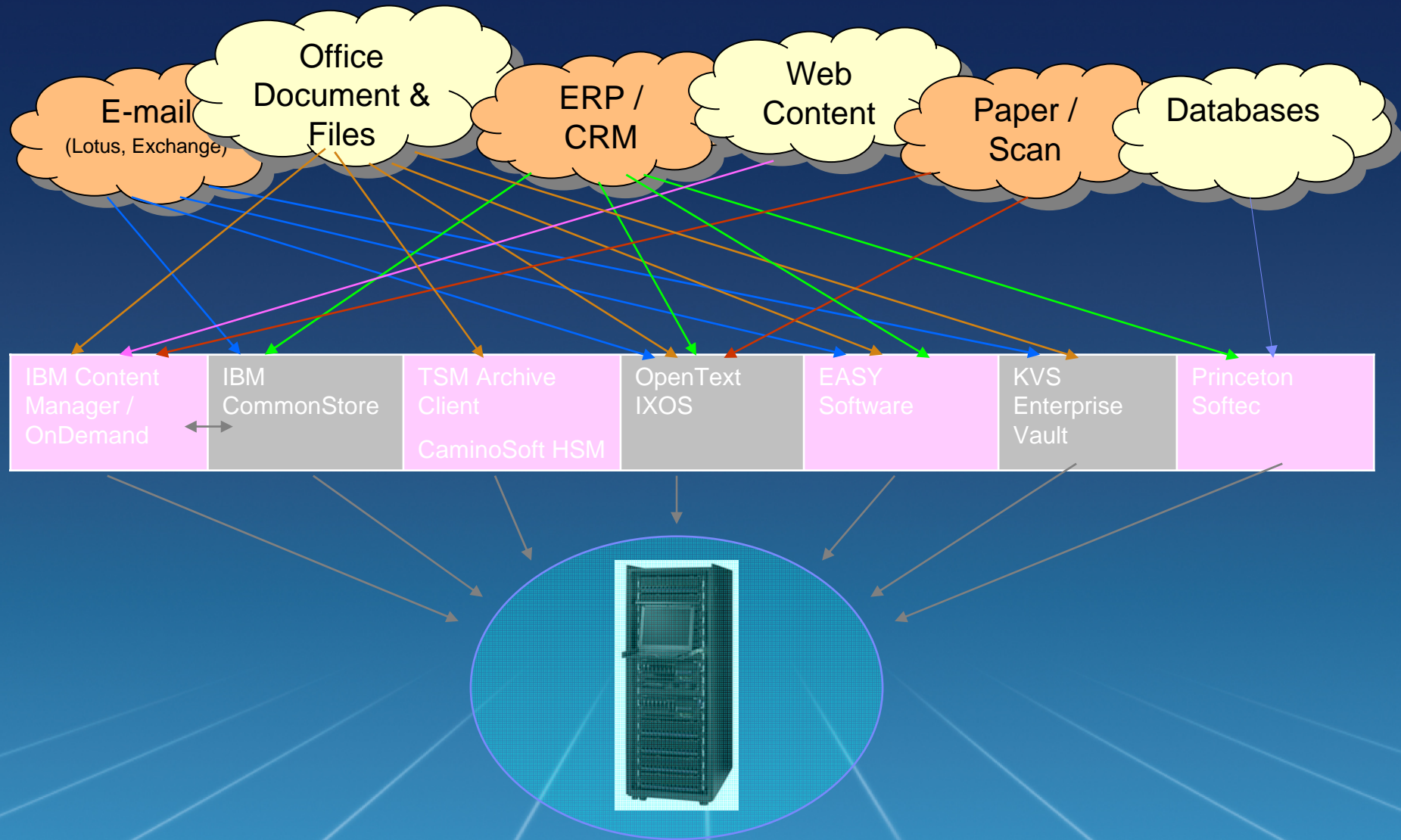


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Typical IBM and ISV ILM Solutions with DR550

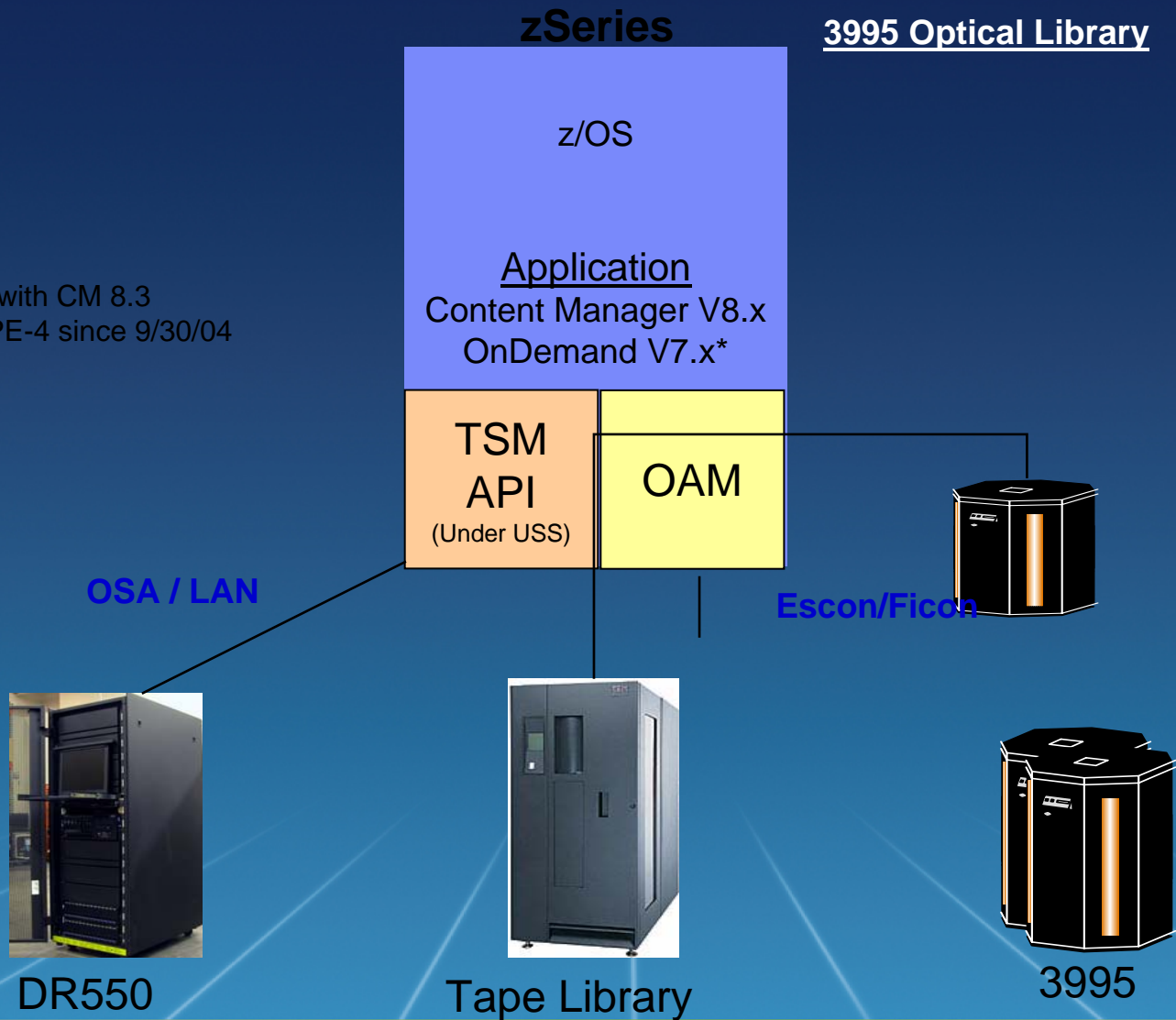


DR550 Solutions Overview



IBM Content Manager Architecture in zOS

*CM available with CM 8.3
CMOD with SPE-4 since 9/30/04



IBM System Storage Archive Manager Client

Update TSM client archive GUI to allow

- Communication with Tivoli Archive Manager (TSM for Data Retention)
- Supports event based retention and deletion hold and release
 - Signal archive retention events for specific files
 - Request deletion hold/release for specific files

Same code as normal TSM backup / archive GUI

- Set in dsm.opt file:
- **ENABLEARCHIVERETENTIONPROTECTION YES**

No need to license archive client

- Archive Manager charges \$1,200 PER TB stored on primary storagepools on the TSM server

