

Degustare la crescita

Un percorso in 4 tappe alla scoperta delle soluzioni IBM

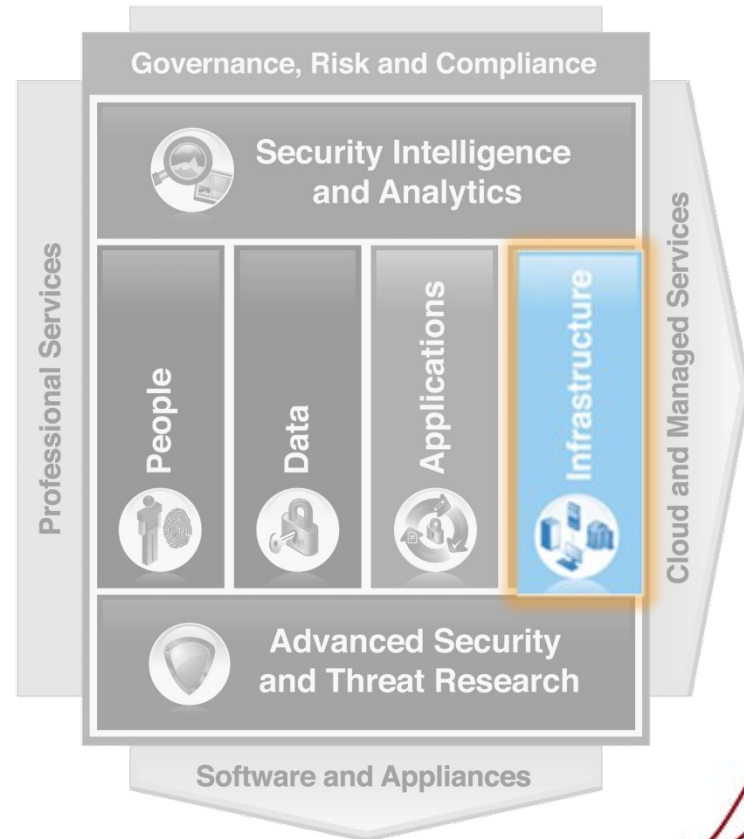
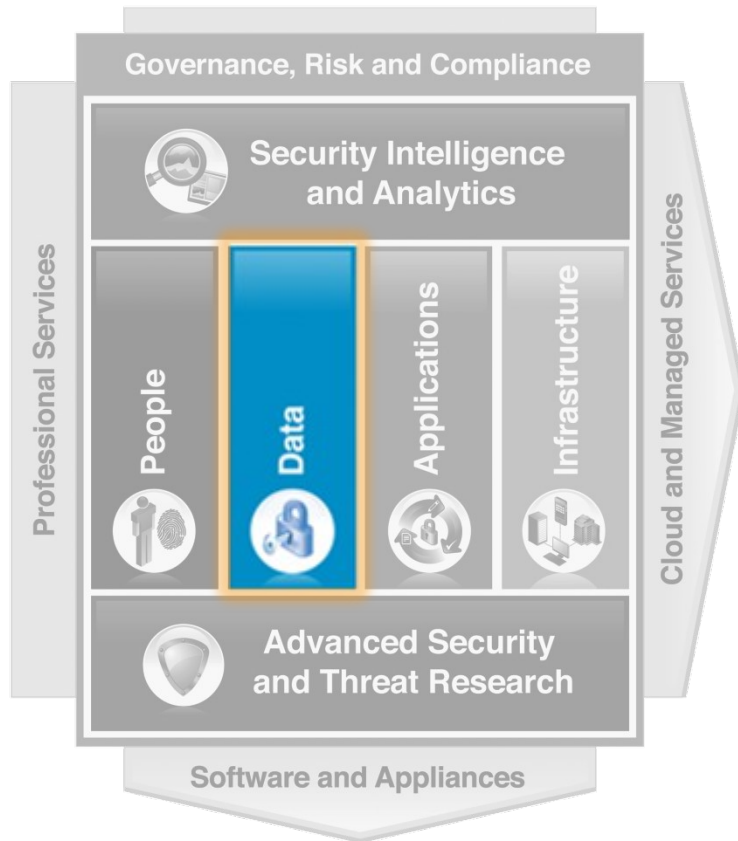
**Protezione dati e continuità operativa,
generazione di fatturato e margini:
analisi e soluzioni**



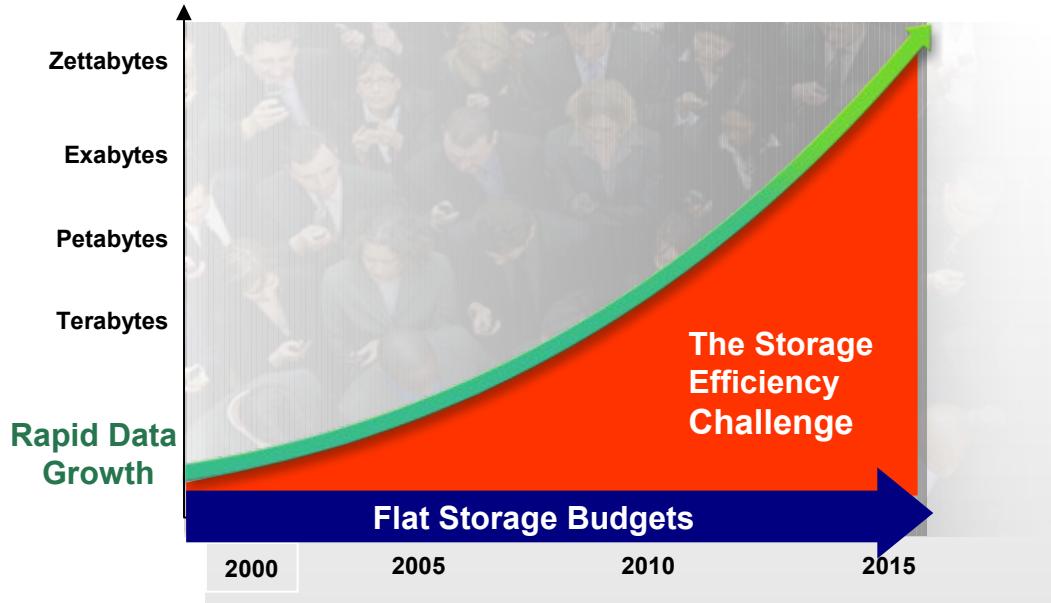


Data & Infrastructure

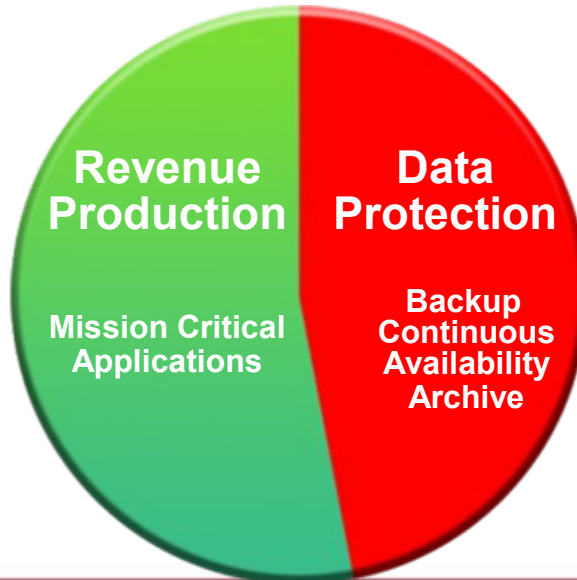
Area of Focus



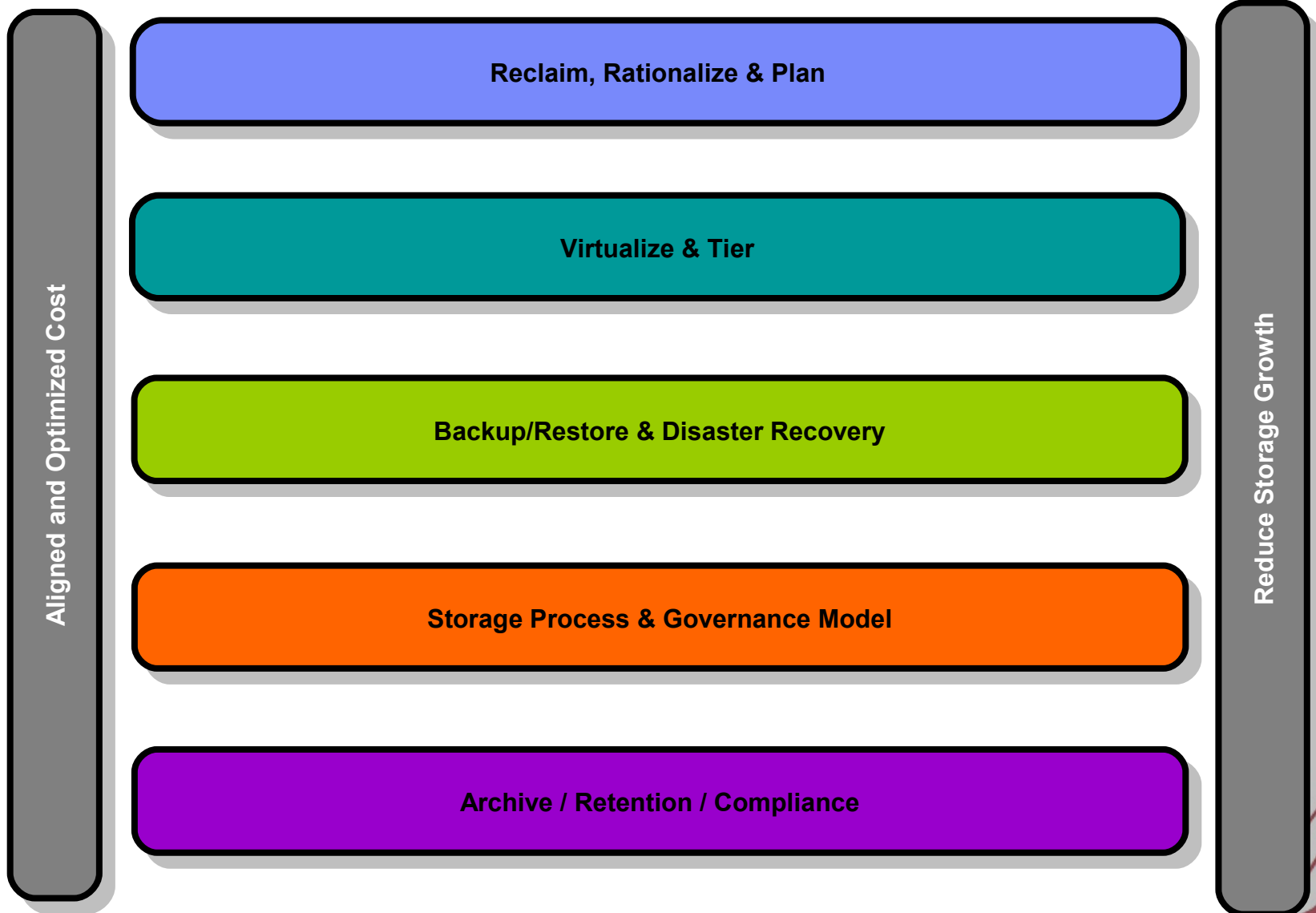
La Sfida



IT Budget



Source: IBM SIO Study



Aligned and Optimized Cost

Reclaim, Rationalize & Plan

Virtualize & Tier

Backup/Restore & Disaster Recovery

Storage Process & Governance Model

Archive / Retention / Compliance

Reduce Storage Growth

23%

do no capacity
planning

85%

have no show
back capabilities

69%

do not use
storage
virtualization

68%

are not using de-
duplication

70%

do not use a
storage catalog

90%

have little to no
process
documentation

30%

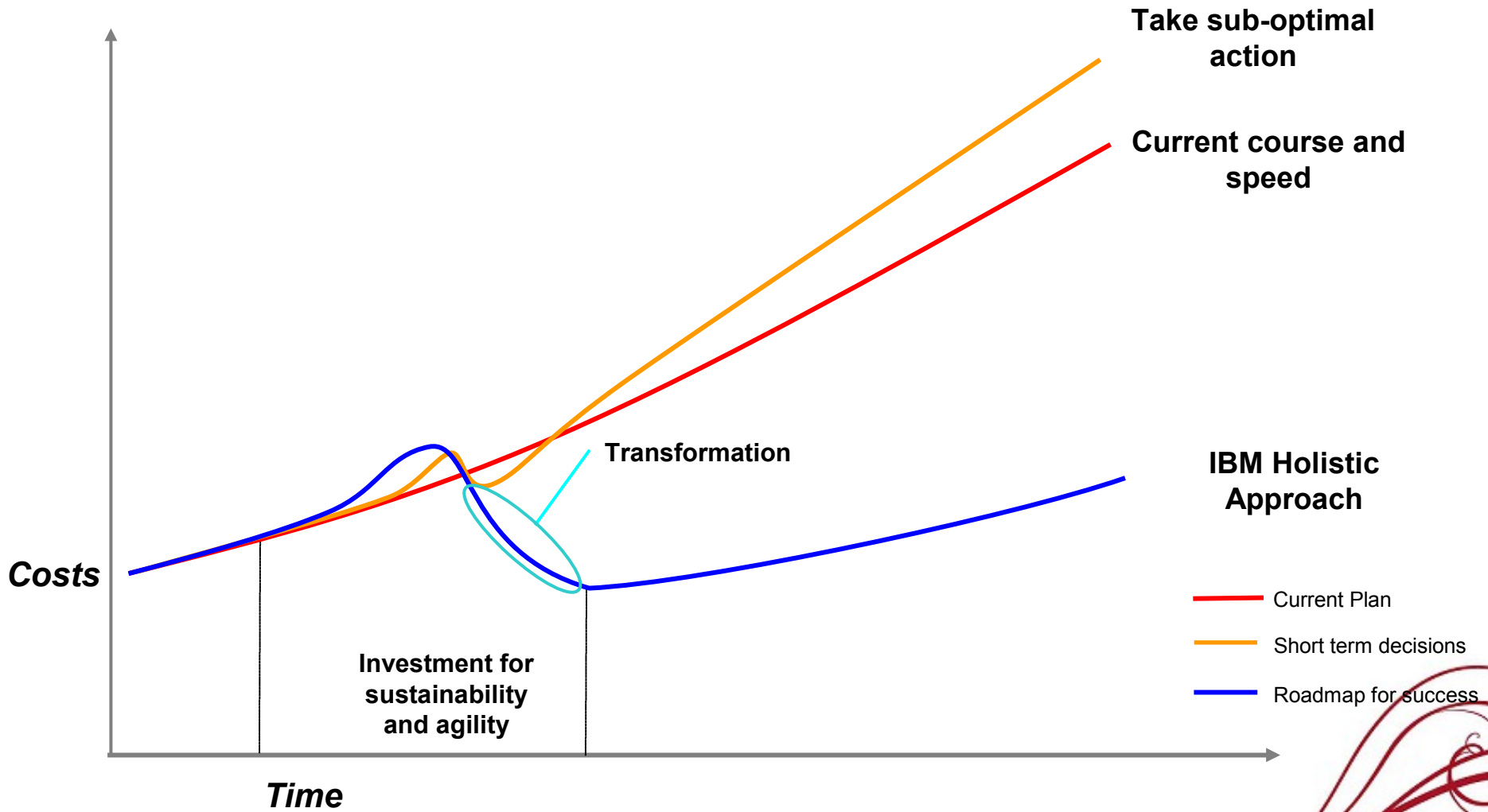
have archive
processes

40%

have no DR
testing

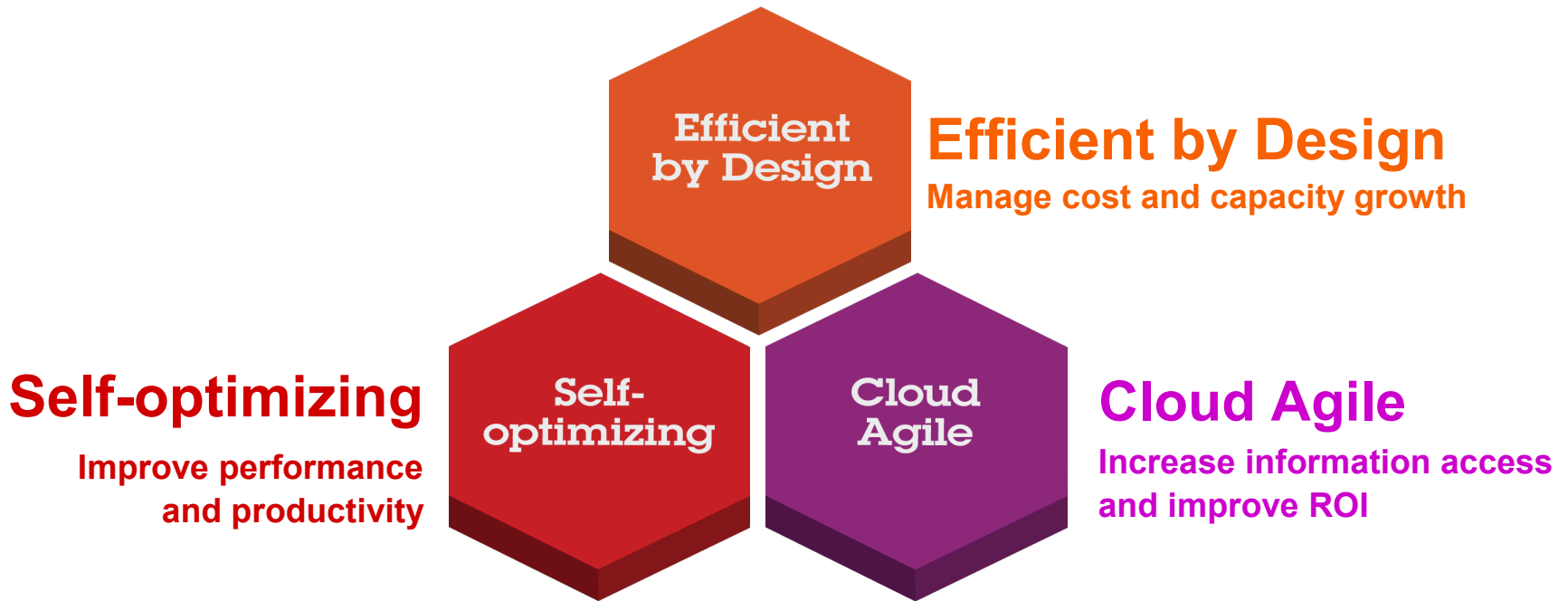
21%

have no DR
strategy





IBM Smarter Storage™



**Business
Continuity**



High Availability

**Infrastruttura
a prova di
malfunzionamenti**



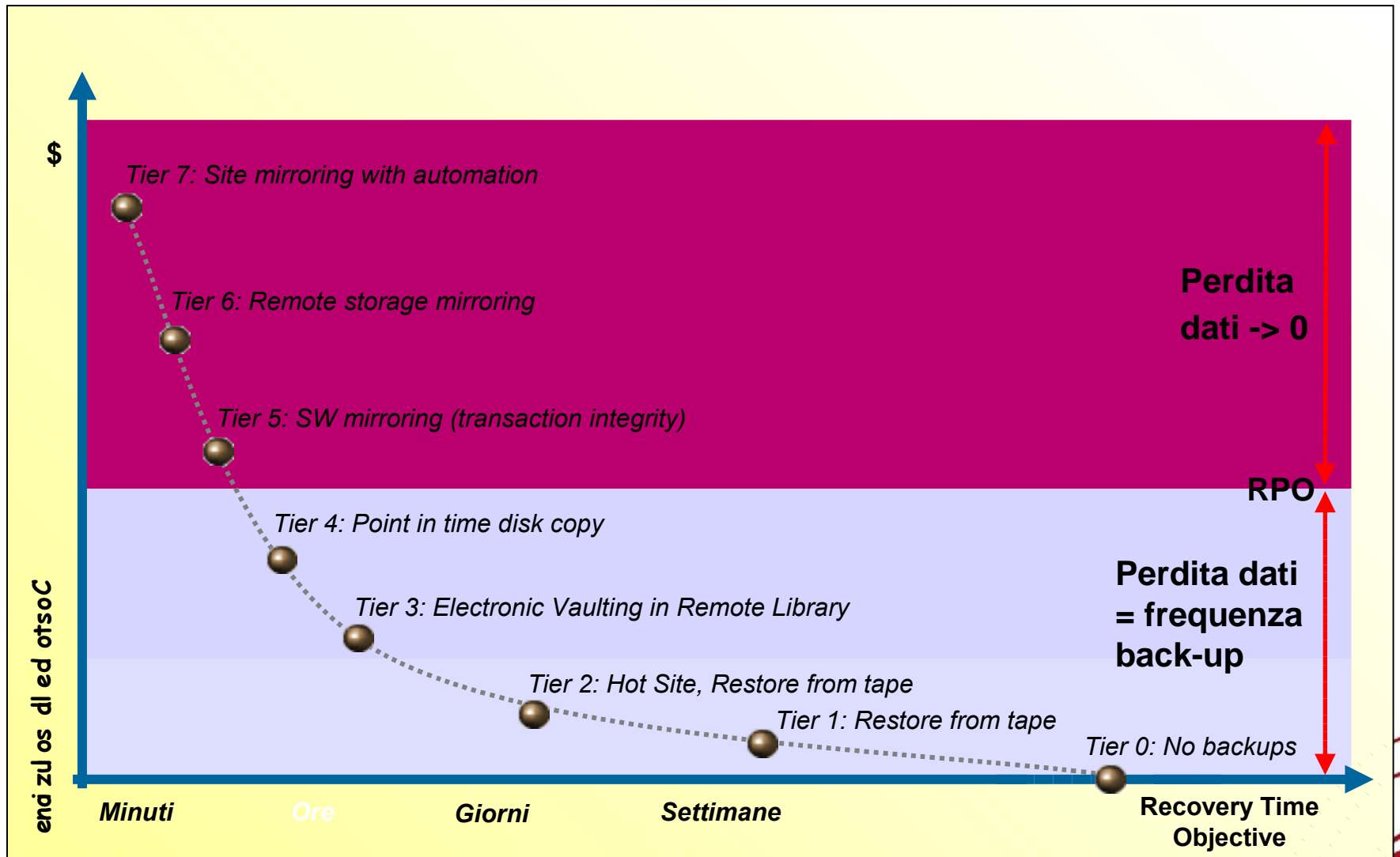
Continuous Operations

**Manutenzione delle
infrastruttura
trasparente alle
applicazioni**



Disaster Recovery

**Protezione da eventi
disastrosi**



Volume Mirroring

- Volume Mirroring

FlashCopy

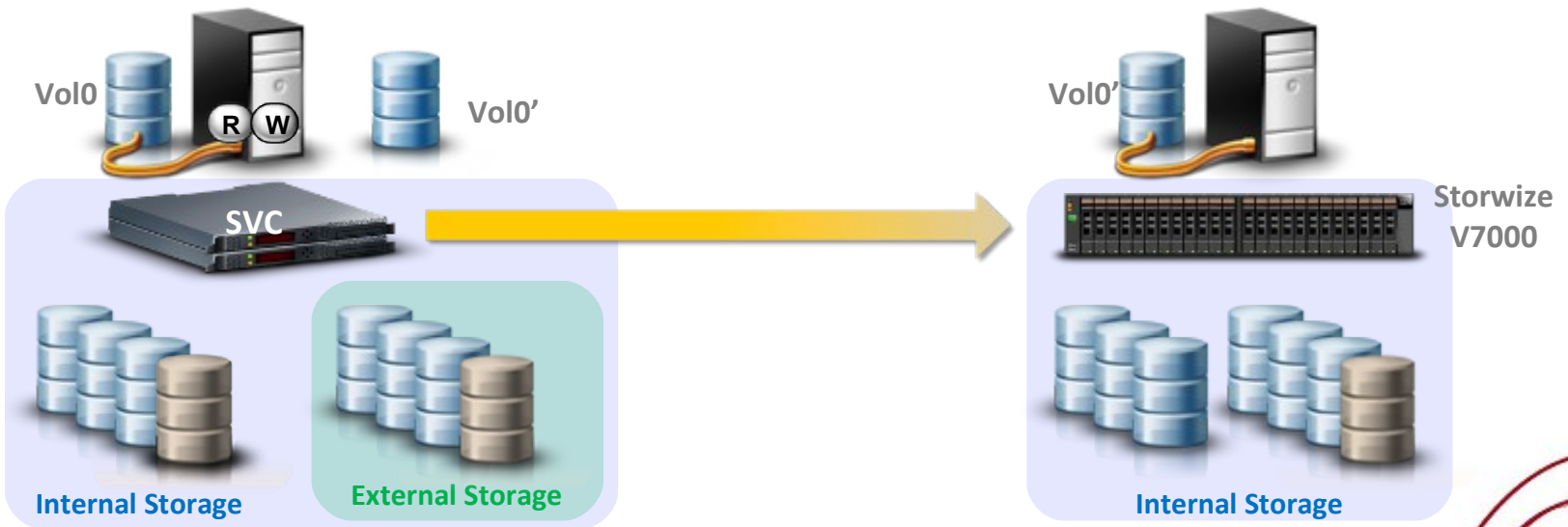
- Point-in-Time Copy

Metro Mirror

- Synchronous Mirror
 - Write IO response time doubled + distance latency
 - No data loss

Global Mirror

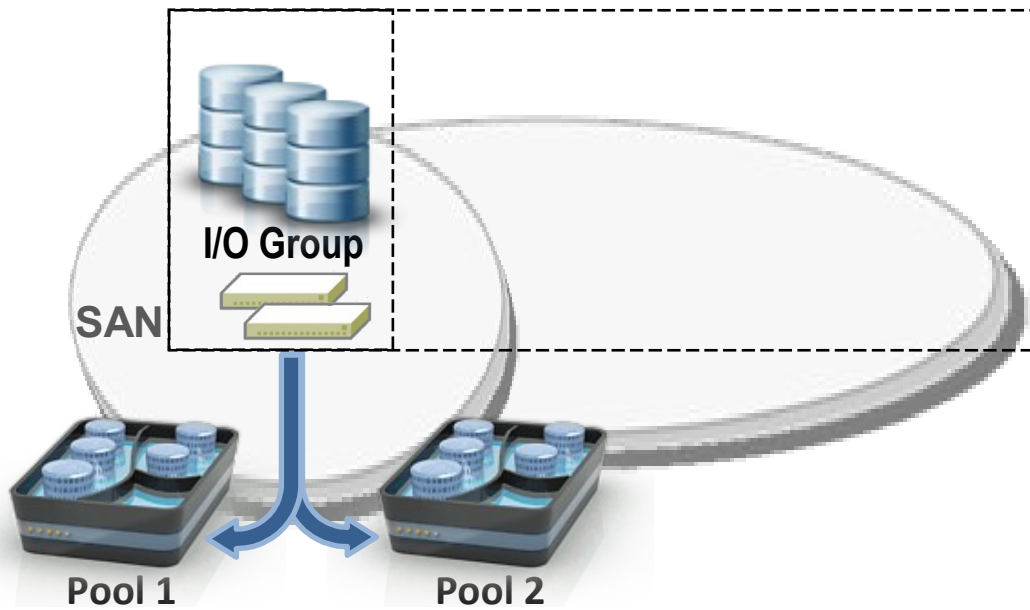
- Consistent Asynchronous Mirror
 - Limited impact on write IO response time
 - Data loss
 - All write IOs are sent to the remote site in the same order they were received on source volumes
 - 1 source and 1 target volumes + change volumes on each site





- To provide High Availability at a server and application level, consider also a clustered front-end configuration (MSCS, PowerHA, VCS, Oracle RAC, vSphere HA, etc.)

Disaster Recovery with Metro or Global Mirror



- To avoid a split brain situation, you MUST have a third room to host one out of the 3 quorum drives



Pool 3

Production room A

Production room B

Production room C

23%

do no capacity planning

85%

have no show back capabilities

69%

do not use storage virtualization

68%

are not using de-duplication

70%

do not use a storage catalog

90%

have little to no process documentation

30%

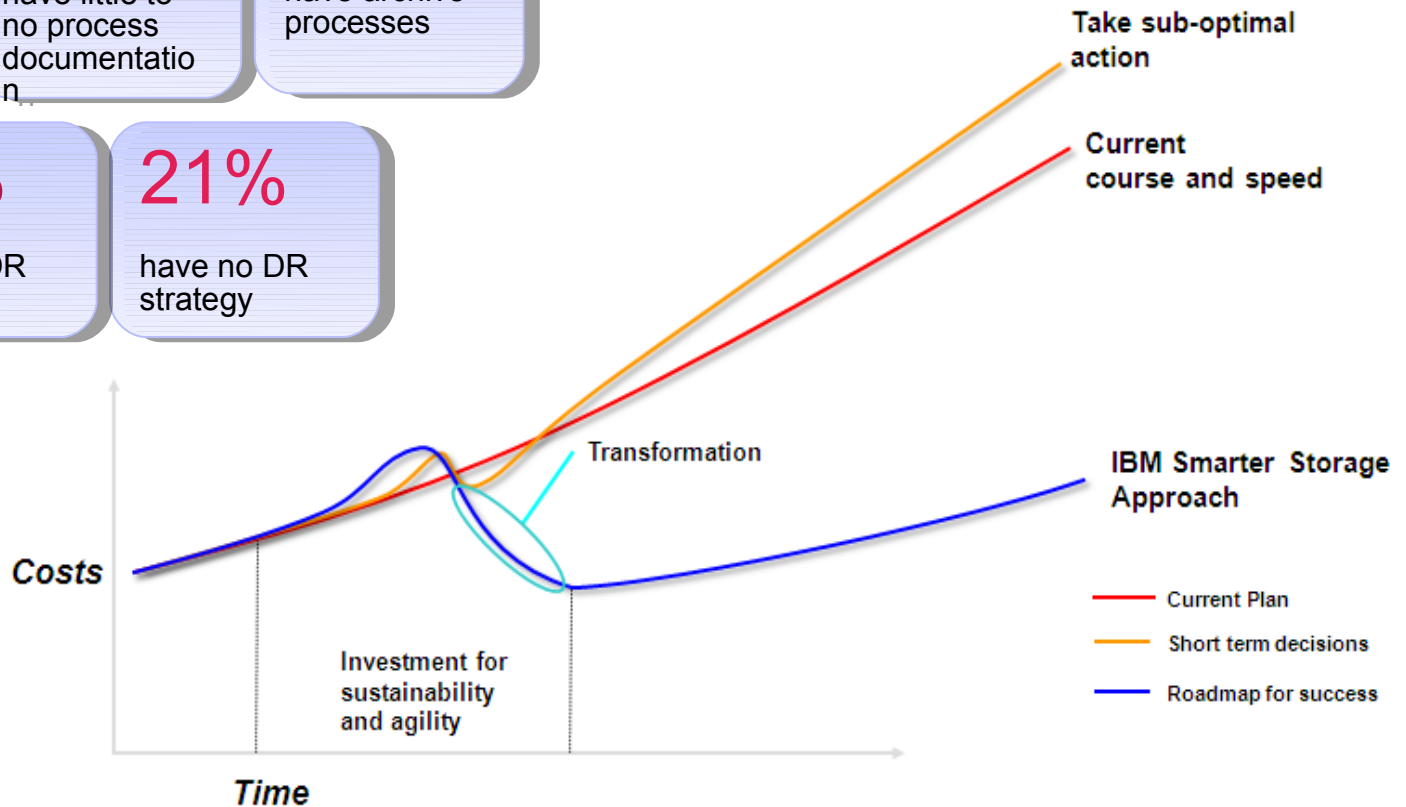
have archive processes

40%

have no DR testing

21%

have no DR strategy



Capital Expense Potential Benefits

2X

the application density in same space

40%

up to 40% energy cost reduction

70%

fewer cores needed reduces software cost

30%

lower storage growth

50%

improvements in disk utilization

3X faster

flash storage

50-80%

compression of data before it is even stored

50%

reduction in duplicate copies of data

20%

avoid buying disk by making it look bigger than it is

Operating Expense Potential Benefits

50%

reduction in management cost

66%

faster set-up

98%

Less time due to automated storage provisioning

47%

savings in administration time

31%

less complexity

26%

faster storage deployments

Efficienza dello storage in 4 mosse:

1. *solo i dati che servono*

- riduzione automatica dello spazio fisico prima, durante e dopo: compressione, deduplica, thin provisioning, thin copies, thin replication,...

1. *più spazio per i dati*

- virtualizzazione sempre più sofisticata: storage hypervisor e virtual storage center

1. *Unificazione e gestione integrata dati strutturati e non strutturati*

- interfacce Grafiche avanzate, Cloud, integrazione file & block

1. *i dati al posto giusto*

- gestione dinamica e distribuita di storage multi livello: IBM Easy Tier e IBM Active Cloud Engine

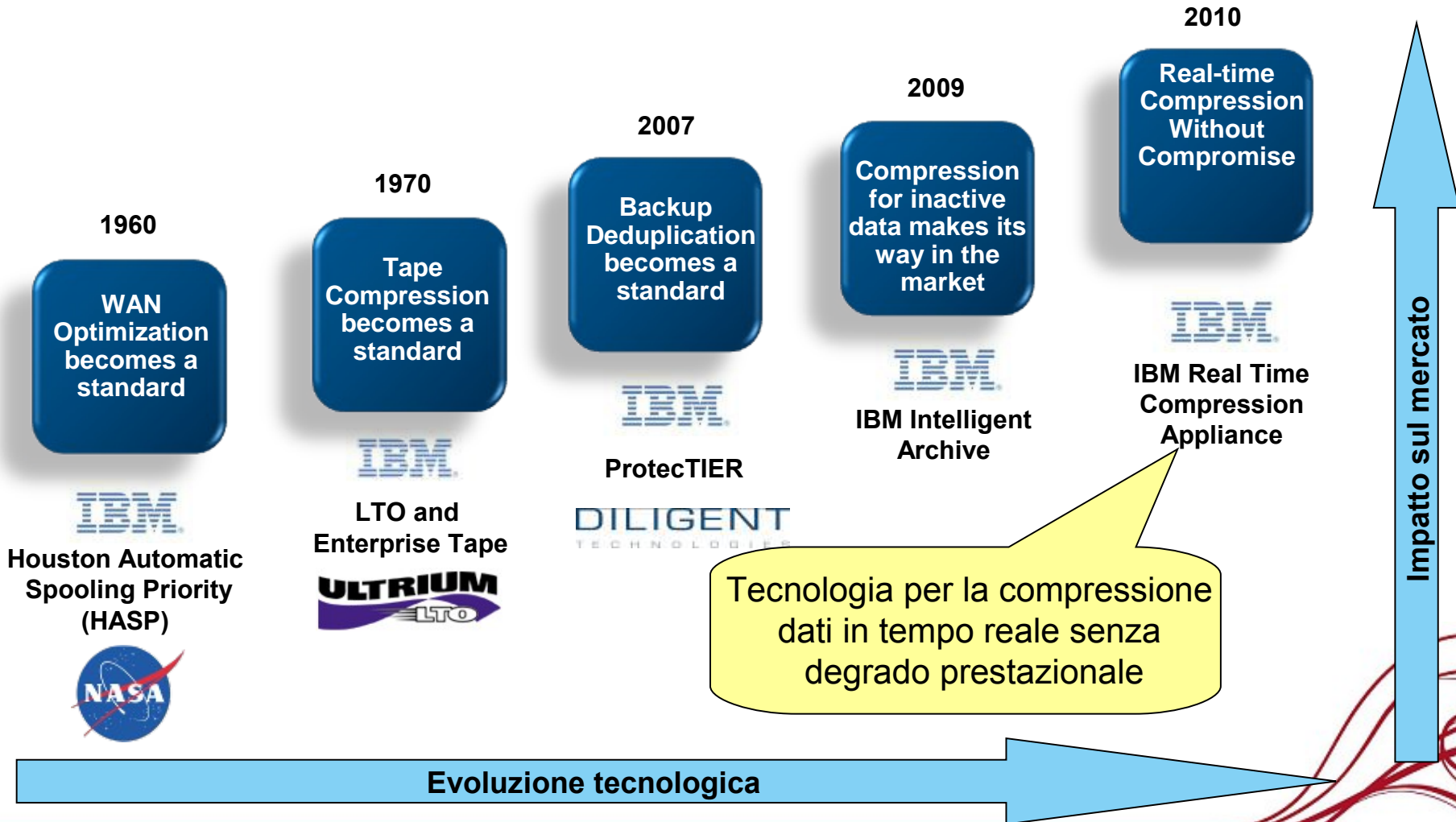
Rete dati

Tape

Backup

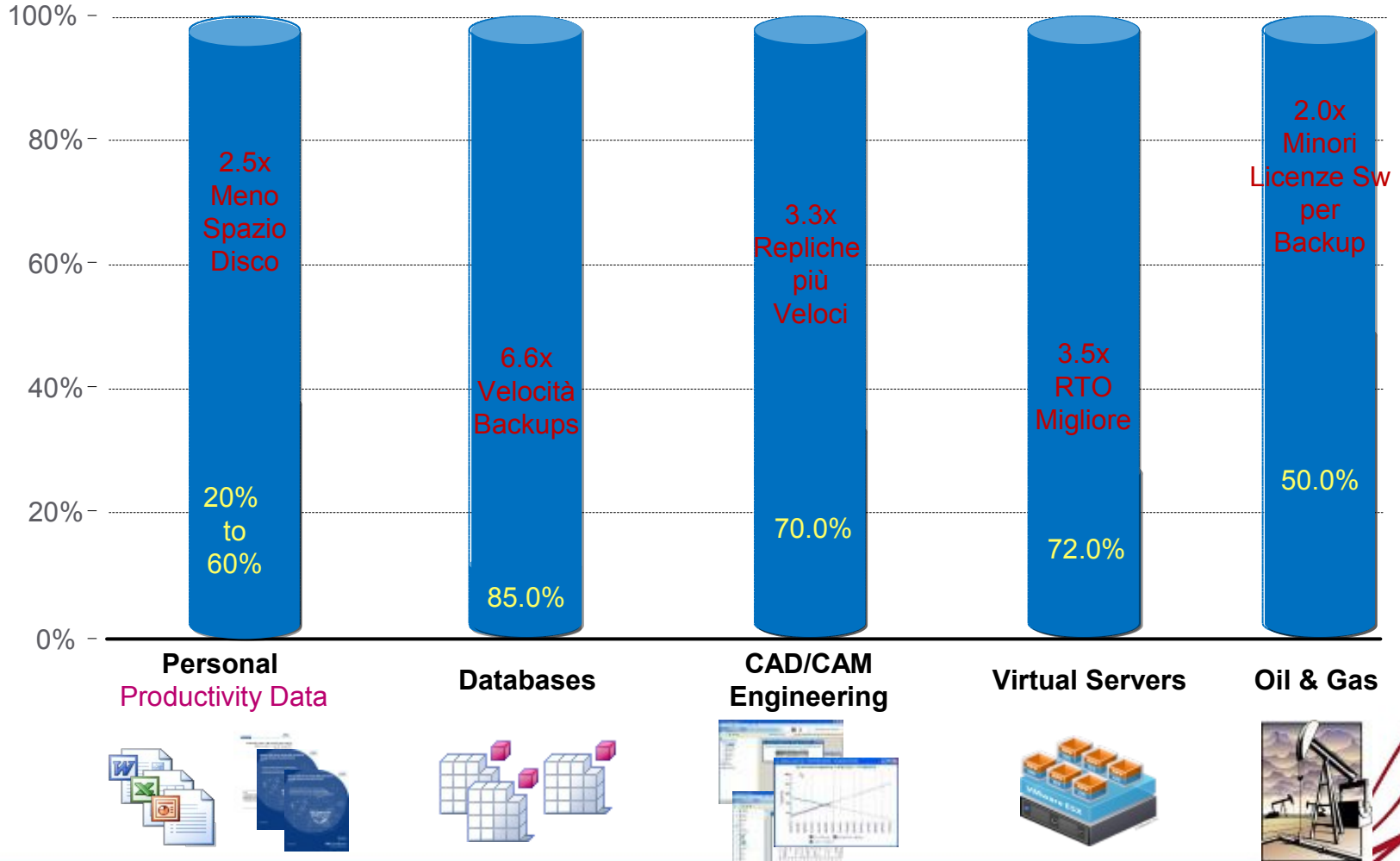
Archivio

Dati Primari



Compressione senza Compromessi

■ Storage after Compression
 ■ Compression Ratio



Efficienza dello storage in 4 mosse:

1. *solo i dati che servono*

- riduzione automatica dello spazio fisico prima, durante e dopo: compressione, deduplica, thin provisioning, thin copies, thin replication,...

1. *più spazio per i dati*

- virtualizzazione sempre più sofisticata: storage hypervisor e virtual storage center

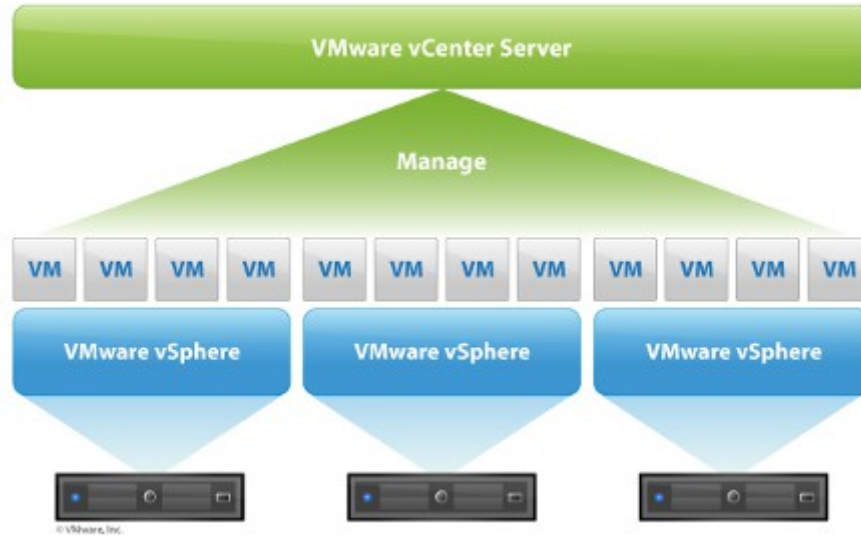
1. *Unificazione e gestione integrata dati strutturati e non strutturati*

- interfacce Grafiche avanzate, Cloud, integrazione file & block

1. *i dati al posto giusto*

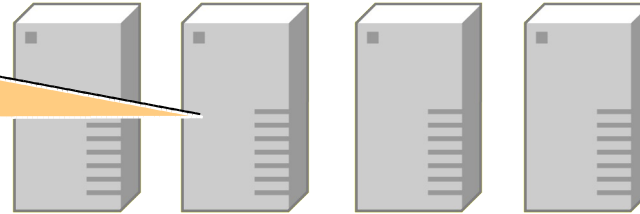
- gestione dinamica e distribuita di storage multi livello: IBM Easy Tier e IBM Active Cloud Engine

vmware®
Virtual Server Infrastructure



Virtualizzazione

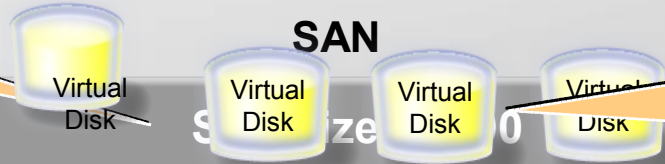
Modifiche “on-demand” **senza impatto** sulle applicazioni



Gestione centralizzata dell'intera infrastruttura virtualizzata (**GUI**)



Unificazione dei servizi di replica dati



Miglioramento prestazionale con aggiunta di “engine” addizionali, livello aggiuntivo di memoria cache e SSD con **Easy Tier**.

Gestione dello spazio ottimizzata con “**thin provisioning**” e repliche dati “space efficient”

Pool(s)

Information Lifecycle Management (**ILM**) trasparente alle applicazioni

IBM

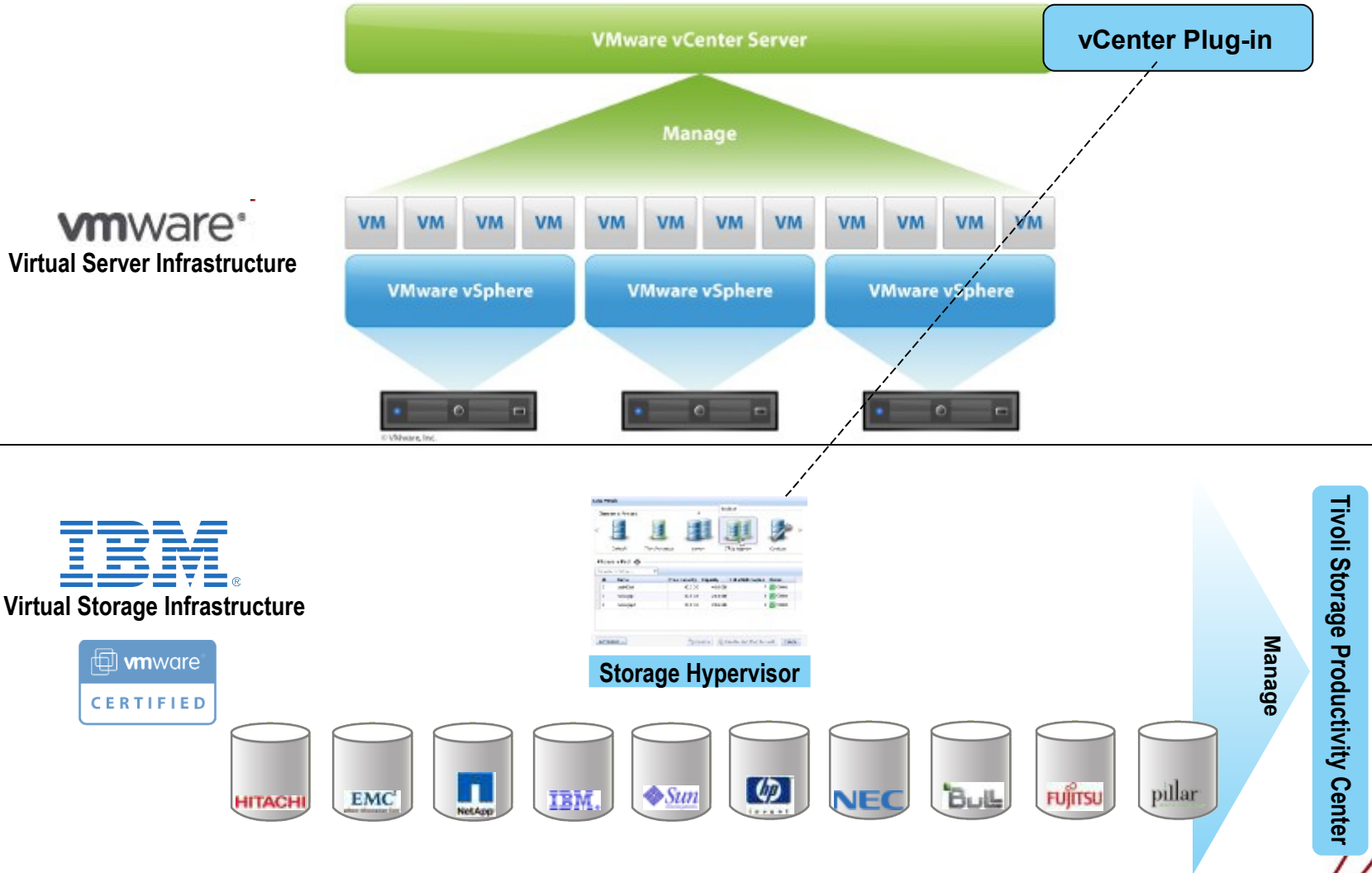
IDS

EMC

HP

Migrazione trasparente tra livelli di storage: facile sostituzione risorse obsolete e passaggio a nuove tecnologie

Virtualizzazione pervasiva della infrastruttura IT



Efficienza dello storage in 4 mosse:

1. *solo i dati che servono*

- riduzione automatica dello spazio fisico prima, durante e dopo: compressione, deduplica, thin provisioning, thin copies, thin replication,...

1. *più spazio per i dati*

- virtualizzazione sempre più sofisticata: storage hypervisor e virtual storage center

1. *Unificazione e gestione integrata dati strutturati e non strutturati*

- interfacce Grafiche avanzate, Cloud, integrazione file & block

1. *i dati al posto giusto*

- gestione dinamica e distribuita di storage multi livello: IBM Easy Tier e IBM Active Cloud Engine

Interfaccia uomo – macchina: console in 3D



<http://www.youtube.com/watch?v=UCEg5qHYj0k>



Mobile Dashboard scaricabile gratuitamente da iTunes:
<http://itunes.apple.com/it/app/ibm-xiv-mobile-dashboard/id465595012?mt=8>

Efficienza dello storage in 4 mosse:

1. *solo i dati che servono*

- riduzione automatica dello spazio fisico prima, durante e dopo: compressione, deduplica, thin provisioning, thin copies, thin replication,...

1. *più spazio per i dati*

- virtualizzazione sempre più sofisticata: storage hypervisor e virtual storage center

1. *Unificazione e gestione integrata dati strutturati e non strutturati*

- interfacce Grafiche avanzate, Cloud, integrazione file & block

1. *i dati al posto giusto*

- gestione dinamica e distribuita di storage multi livello: IBM Easy Tier e IBM Active Cloud Engine

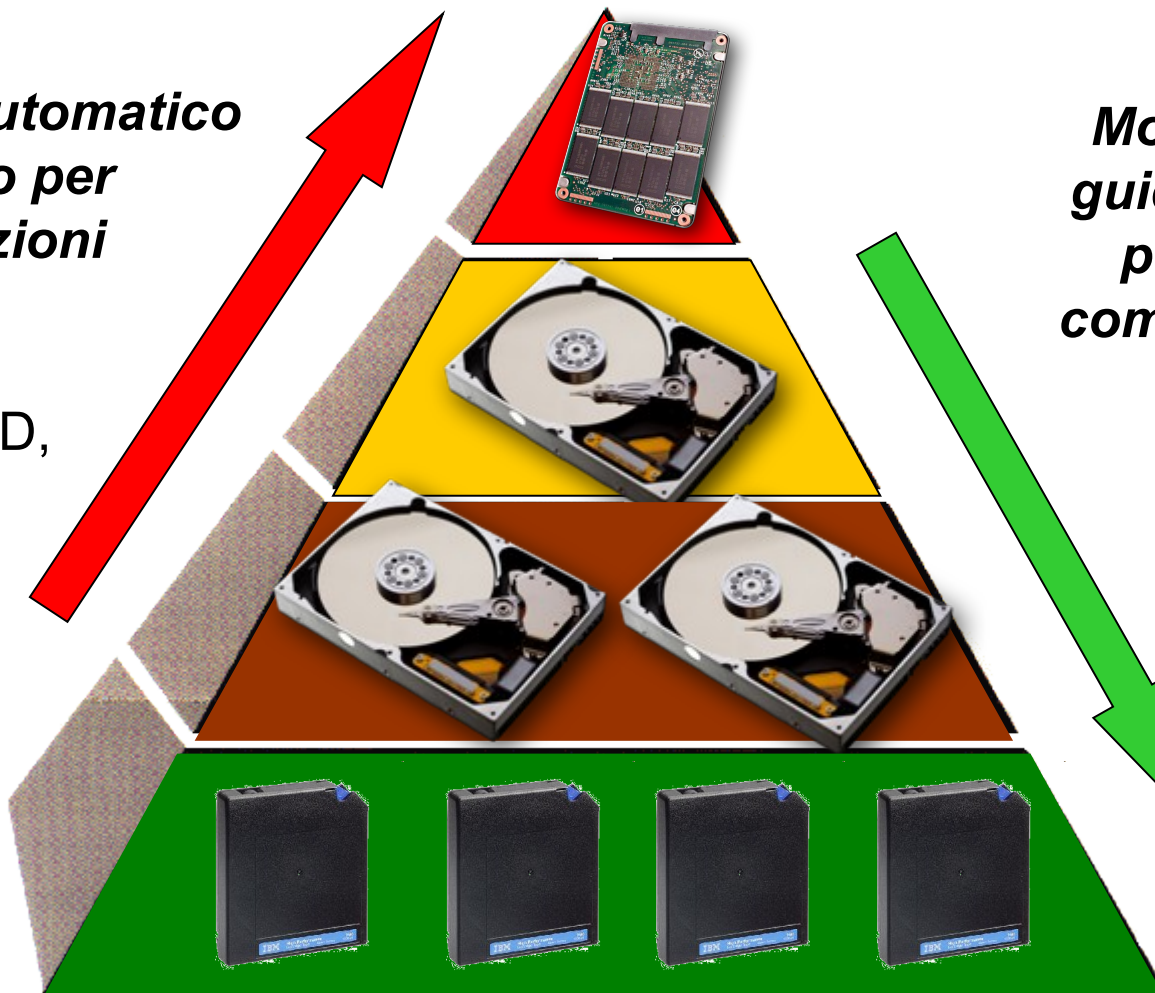


I dati al posto giusto: gestione automatica della gerarchia delle memorie

Tiering automatico ottimizzato per le prestazioni

Easy Tier
(SSD, HDD,
NL-HDD)

Virtual
Tape
Libraries



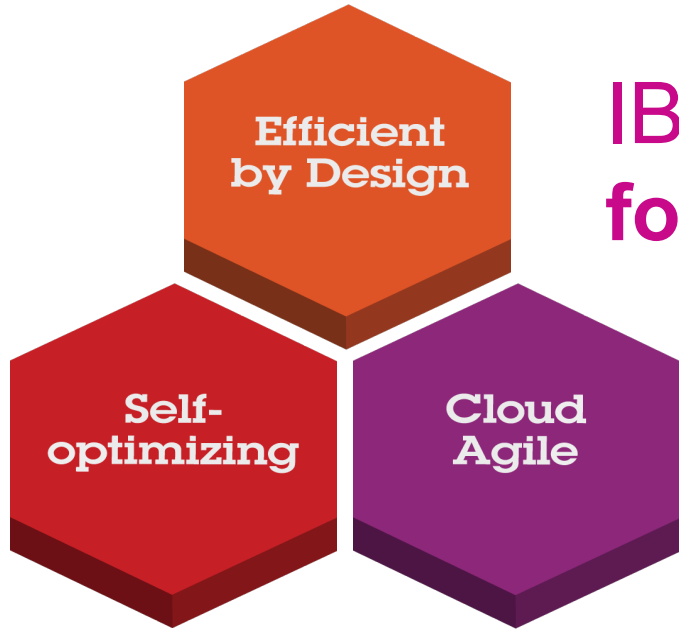
Movimentazione guidata da policy per esigenze di compliance e/o di business

Long-Term
Retention
Archive

Come si posiziona la vostra azienda ???


- BC tool utilizzati ??? Efficacia ???
- Processo di “change management” ???
- Tool di monitoring ???
- Elementi critici ??? Tasso di crescita ???
- Normative attuali ??? Future ???
- Valutazione dell' RTO odierno ???
- Dati che si possono ricreare ??? Quanti ???
- Budget per fornire Business Continuity ???





IBM Smarter Storage for Smarter Computing

Thank You
Thank You




PureFlex

Integrated Solutions

IBM SmartCloud

- Virtual Storage Center













IBM Smart Analytics Solutions (ISAS)





Built-in Innovation

- Storage Virtualization SW and SVC Easy Tier
- IBM Active Cloud Engine™, RamSan Flash / Solid State
- Real-time Compression
- Deduplication
- Linear Tape File System (LTFS)

Optimized Storage Systems

For Enterprise Workloads	 DS8000	 XIV	 SONAS	
For Midrange & Entry Workloads	 Storwize V7000 Unified	 N series	 Storwize V3700	
For Data Protection and Retention	 ProtectTIER TS7620/50/80 Enterprise LTO	 Tape Library TS3310	 Tape Automation TS3500	 Tape Virtualization TS7720/7740

Storage Management Software

-  Tivoli Storage Productivity Center
-  Tivoli Key Lifecycle Manager
-  Tivoli Storage FlashCopy Manager
-  Tivoli Storage Manager