

Requisiti per l'Implementazione

Collect Resource Usage Data with
IBM Tivoli UAM Data Collectors



Define Business Rules



Configure IBM Tivoli UAM



Benefici immediati usando ITUAM

- Resource Accounting scalabile per grandi enterprise o specifiche piattaforme, Financial Reporting and Chargeback
- Gestione di ambienti virtualizzati server/storage.
- Budgeting e Cost Management per z/Series, xSeries, pSeries e iSeries.
- Definizione dei costi dei servizi che IT fornisce. Migliore allineamento tra IT e Business
- Una componente ben disegnata per l'IT Service *Management-support dei processi di ITIL IT Financial Management.*

Customers (Partial List)

- Johnson & Johnson
- Blue Cross/Blue Shield
- Protective Life
- International Paper
- Volvo
- Ikea
- ING
- U.S. Dept. of Agriculture
- U.S. Navy
- U.S. EPA
- U.S. Treasury
- National Institutes of Health
- Pratt & Whitney
- Sikorsky
- United Defense
- Eastman Chemical
- Delta Dental
- GeneralRe.
- Southern Company
- T. Rowe Price
- Salt River Project
- Euroclear Bank
- Pershing/Bank of New York
- MassMutual Financial
- National City Corporation
- Commerce Bank
- Depository Trust
- Wells Fargo
- Temple Inland
- Lincoln Life
- Deutsche Bank, NY
- Union Bank of California
- Ahold USA
- Physicians Mutual
- Providence Health Care
- States of AL, DE, IN, IA, KY, LA, ME, MT, NM, NV, OR, TN, UT, VT
- Counties of Miami-Dade, Harris, Contra Costa, Alameda, San Francisco
- Cities of San Francisco, Dallas, Los Angeles
- Outsourcers / Service Bureaus

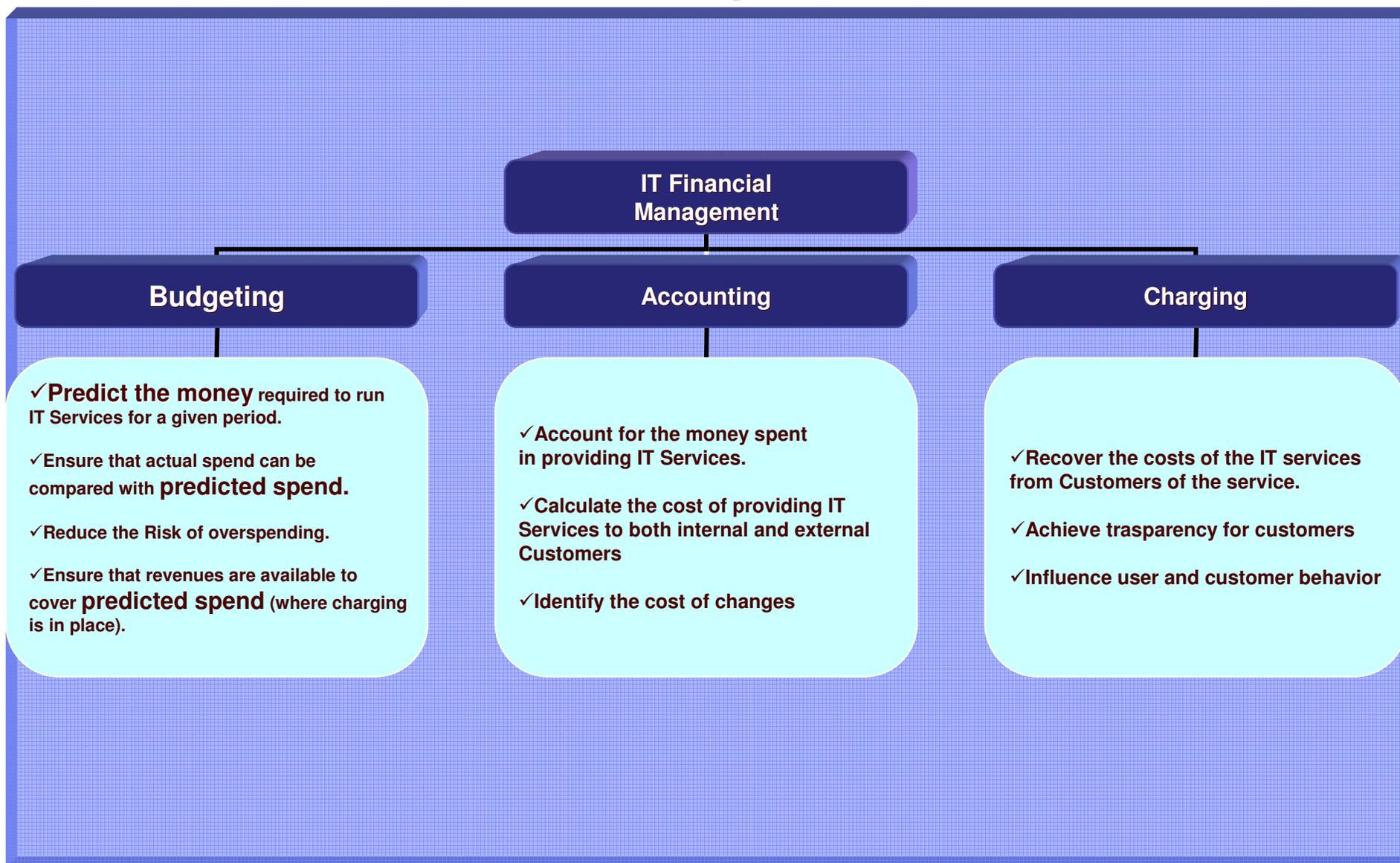
Customers



Over 170 customers

- 90% Fortune 500
- 90% also IBM customers

ITIL Financial Management Tasks



Come posso prevedere i costi dell'IT?

Tutte le compagnie hanno la necessità di gestire i loro assets in modo:

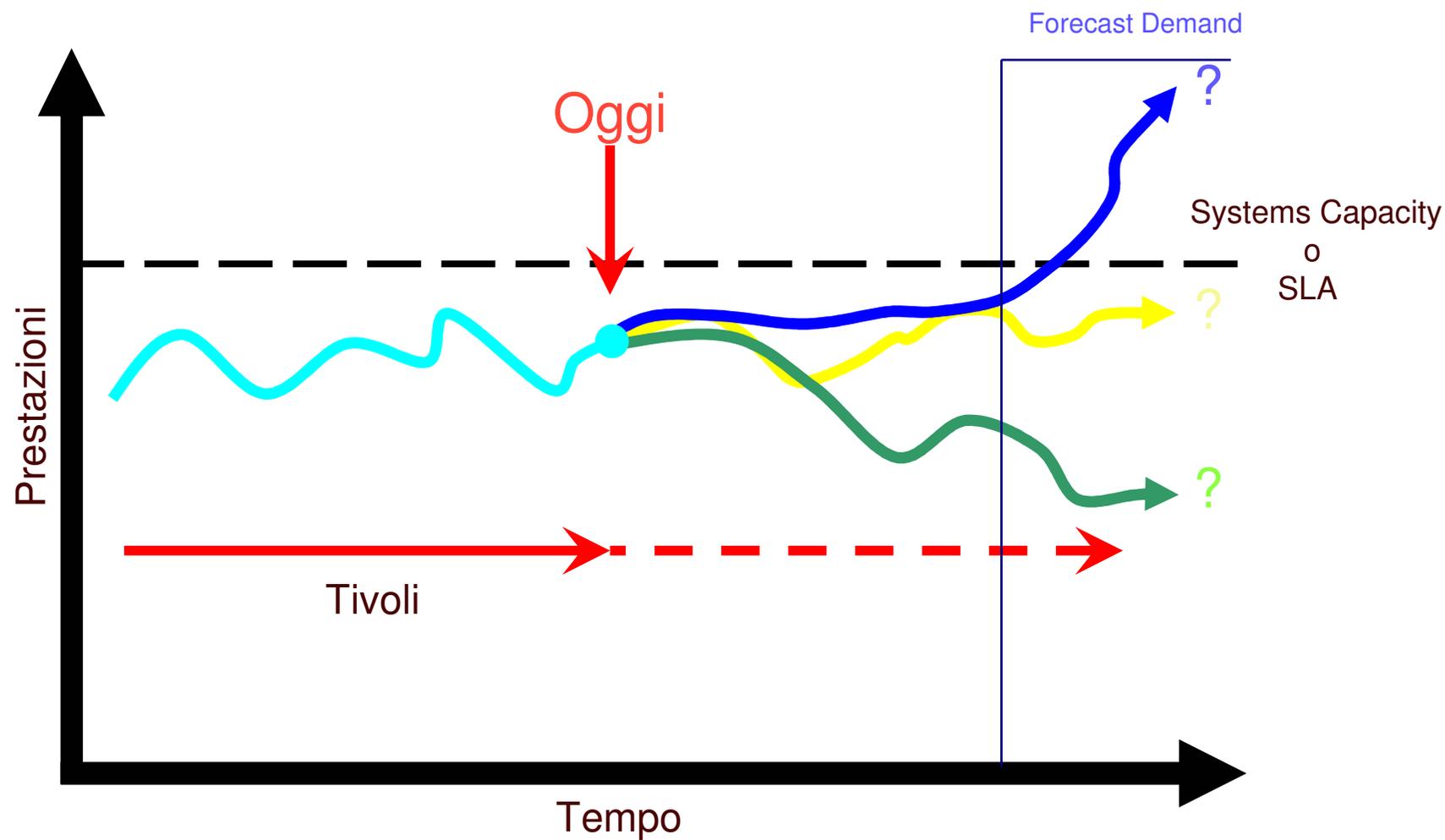
- Efficiente
- Profittevole
- Competitivo

La quantità e il costo di questi assets deve necessariamente essere pianificata e controllata.

In una infrastruttura IT il processo che si occupa di prevedere i carichi di lavoro, tradurre i carichi di lavoro in richieste di risorse e definire la quantità di risorse necessarie a soddisfare i livelli di servizio concordati è il

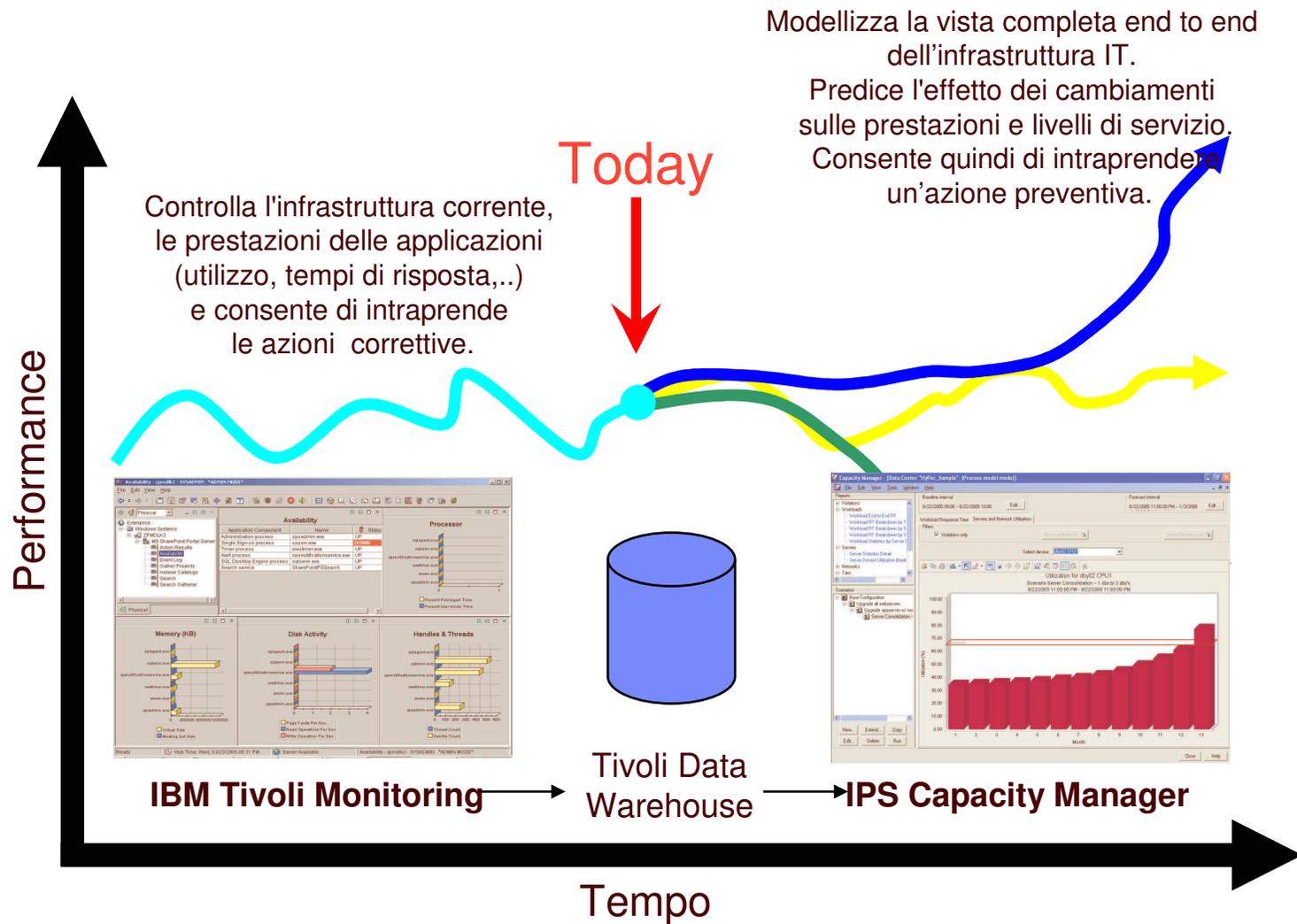
CAPACITY PLANNING

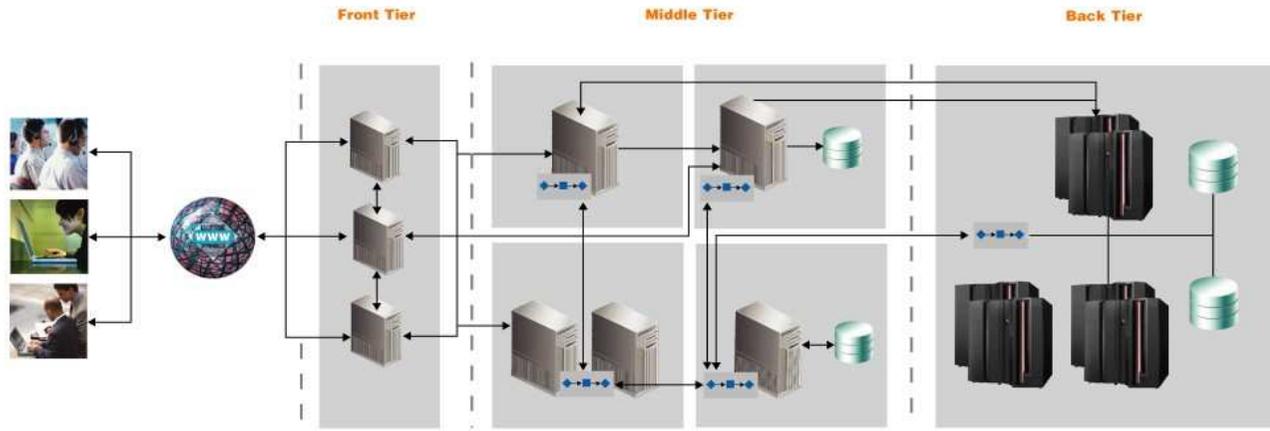
La preoccupazione del cliente: Che cosa accadrà dopo ?



- Quale servizio sperimenterà i prossimi problemi di prestazioni ? E Quando ?
- Quali impatti avranno sulla capacità totale dei sistemi e sui livelli di servizio i cambiamenti infrastrutturali e i nuovi carichi di lavoro ?
- Quale parte dell'infrastruttura ha la più alta probabilità di entrare in sofferenza all'incrementarsi della domanda di servizi da parte degli utenti?
- Quali modifiche devo apportare alla mia infrastruttura IT per evitare problemi prestazionali ? Quando dovrei metterli in piano ?
- Quali politiche di consolidamento posso mettere in atto e su quali elementi dell'infrastruttura senza avere ripercussioni negative sui livelli di servizio ?
- Quali sono le migliori soluzioni Hardware per soddisfare i miei obiettivi prestazionali e di costo ?

Soluzione: ITM + IPS Capacity Manager





E' possibile *modellizzare* modifiche all'infrastruttura IT come ai carichi di lavoro:

Servers

- # of servers
- CPU speed
- # CPUs
- Operating Systems
- Disk speed
- Server Consolidation (e altri)

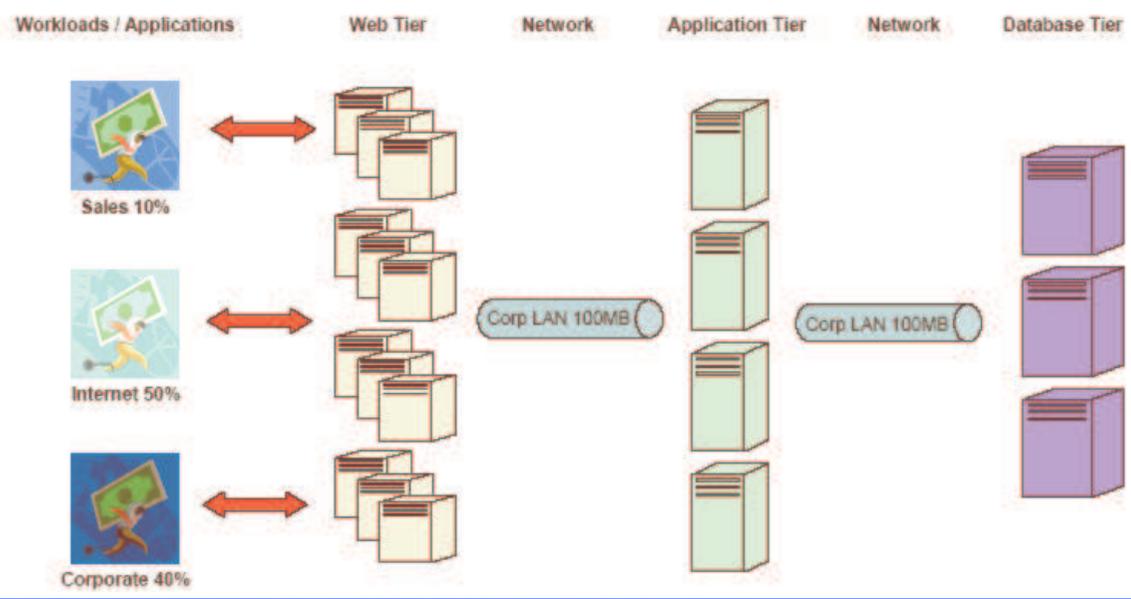
Networks

- Bandwidth
- Latency (e altri)

Workloads

- Growth Rates (variable or static)
- Response time thresholds
- Workload Reassignment (e altri)

Holistic View of Capacity and Performance



Il prodotto fornisce una libreria con oltre 2000 componenti tra servers ed elementi di rete.

- File Edit View Tools Window Help
- Reports
 - Violations
 - Server Utilization Violations
 - Workload Response Time Violations
 - Workloads
 - Workload End-to-End RT
 - Workload RT Breakdown by Tier
 - Workload RT Breakdown by Server and Network
 - Workload RT Breakdown by Server and Network Device
 - Workload Statistics by Server Device
 - Servers
 - Server Statistics Detail
 - Server Device Utilization Breakdown by Workload
 - Networks
 - Network Statistics Detail
 - Network Device Utilization Breakdown by Workload
 - Tiers
 - Tier Response Time by Workload
 - Business Units
 - Business Unit Response Time by Workload
 - Scenarios
 - Workload Response Time Comparisons
 - Server Device Utilization Comparisons

- Scenarios
 - Base Configuration
 - add 2 cpus to web server
 - consolidate web to app server
 - consolidate web and app to hyp server
 - Variable internet growth rate
- New Extend Copy
Edit Delete Run

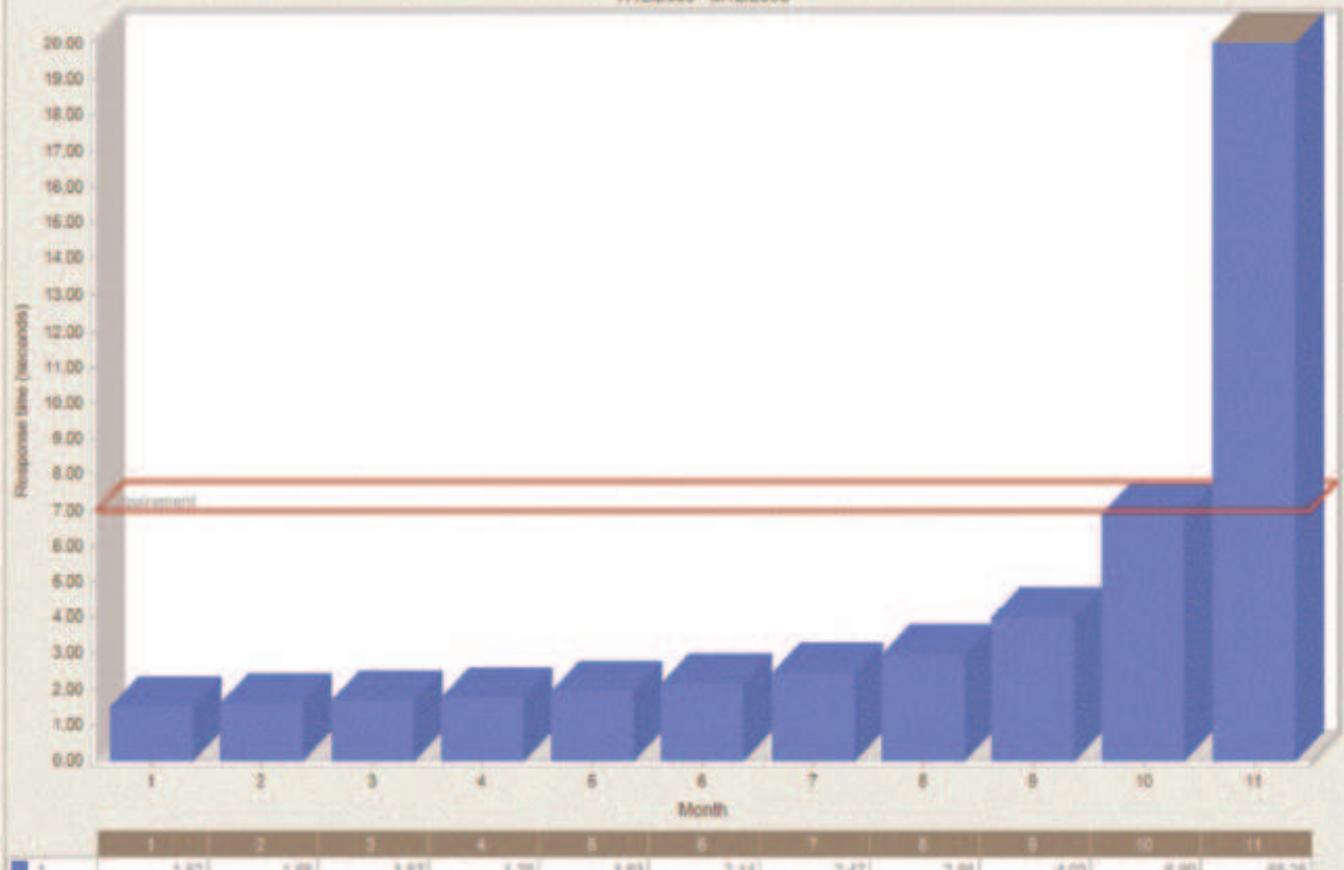
Baseline interval
7/11/2005 15:00 -- 7/11/2005 16:00

Forecast interval
7/12/2005 -- 7/12/2006 (Monthly)

Workload Response Time | Servers and Network Utilization |

Violations only Select workload:

End-to-End Response Time for Workload Internet
Scenario consolidate web and app to hyp server
7/12/2005 - 6/12/2006



IBM Tivoli Monitoring e IPS Capacity Manager sono soluzioni complementari che lavorando insieme:

- Minimizzano i problemi al business riducendo drasticamente il tempo medio di risoluzione dei problemi e gli incidenti derivati da upgrades non ottimali.
- Massimizzano la produttività evitando problemi con gli SLA attraverso una predizione proattiva dei colli di bottiglia.
- Riducono i costi consentendo di identificare (e simulare) le opportunità di consolidamento con un immediato riscontro sui livelli di servizio, permettendo di operare le modifiche infrastrutturali con un ottimo livello di confidenza.
- Consentono di verificare i scenari “What if” senza intaccare l’ambiente di produzione.
- Consentono di simulare vari scenari architetturali con diverse scelte di HW al fine di ottenere i migliori risultati di prestazioni/capacità

Ma il Budgeting ?

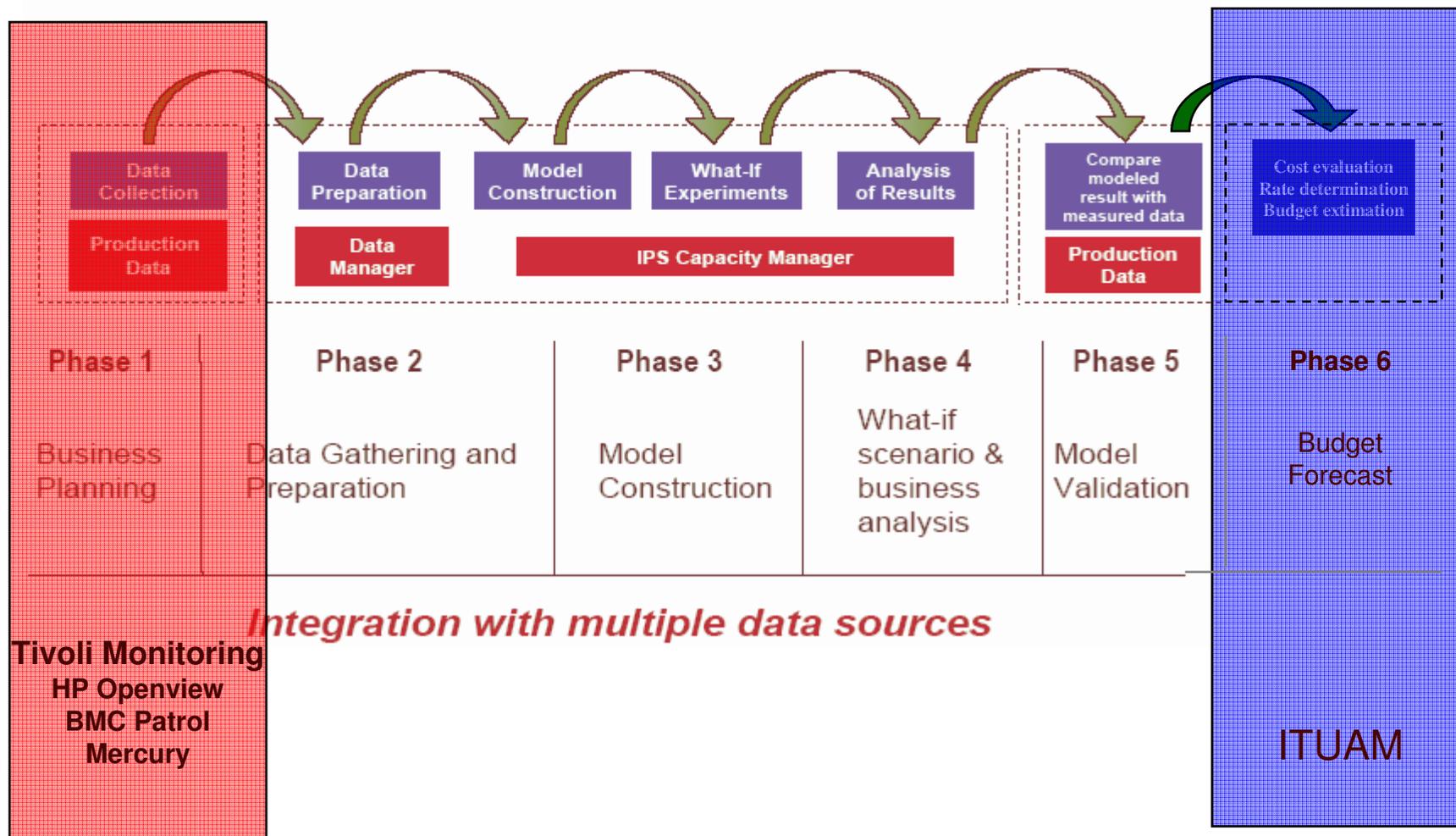
Se si formattano i dati di forecast, prodotti da IPS Capacity Manager, in “CSR” Records, utilizzando il “Conversion Builder”, allora ITUAM può facilmente processarli, utilizzando lo “Universal Collector”, applicando l’Account Code Conversion, applicando i Rates di pertinenza (esistenti).

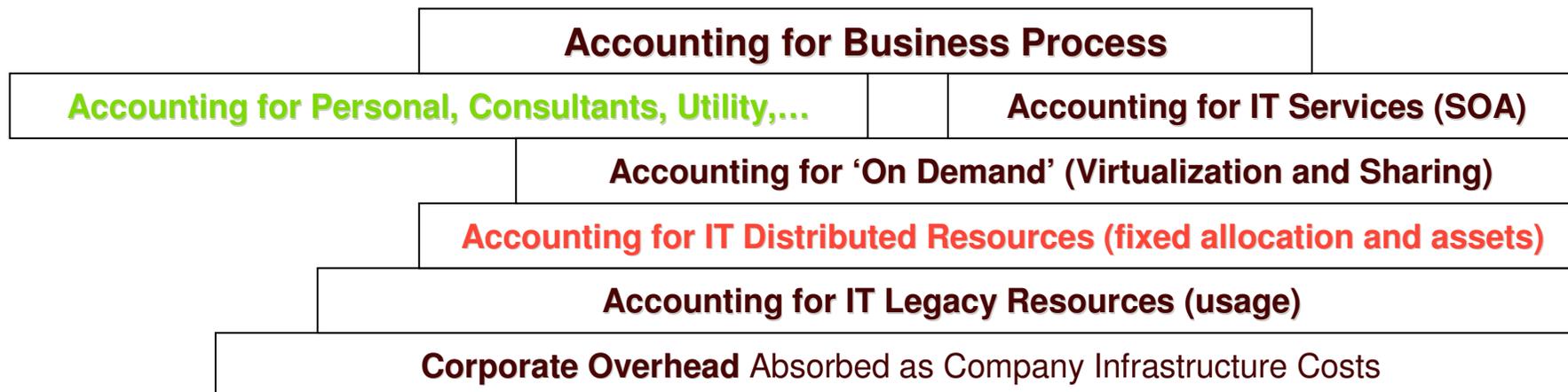
In tal modo nel database ITUAM saranno contenuti sia i dati storici e attuali che quelli futuri.

A questo punto il “Financial Modeler” è in grado di costruire un modello per i periodi futuri, semplicemente, immettendo i costi in pools/subpools come usuale, e selezionando i periodi futuri sul Rate Calculation Tab.

Questo consentirebbe di costruire i nuovi rates basati sui costi e l’utilizzazione previsti per il futuro.

Capacity Manager Methodology





Cosa è il Software Asset Management (SAM)?

SAM è un sottoinsieme dell'IT Asset Management

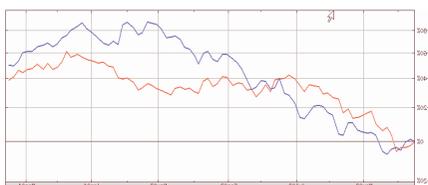
IT Asset Management (ITAM)

Hardware

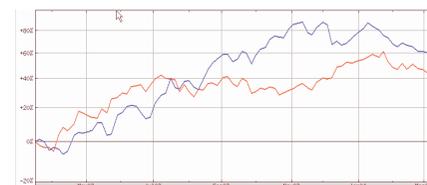
Software

Contracts

Software Asset Management



HW Cost Trends



SW Cost Trends

“In the first year (1991), we identified 76 products that were seldom or never used and could be eliminated. We saved \$1.25M in software license and maintenance costs.”
- Global Oil Producer

SAM consente.....

■ **Controllo dei costi del Software**

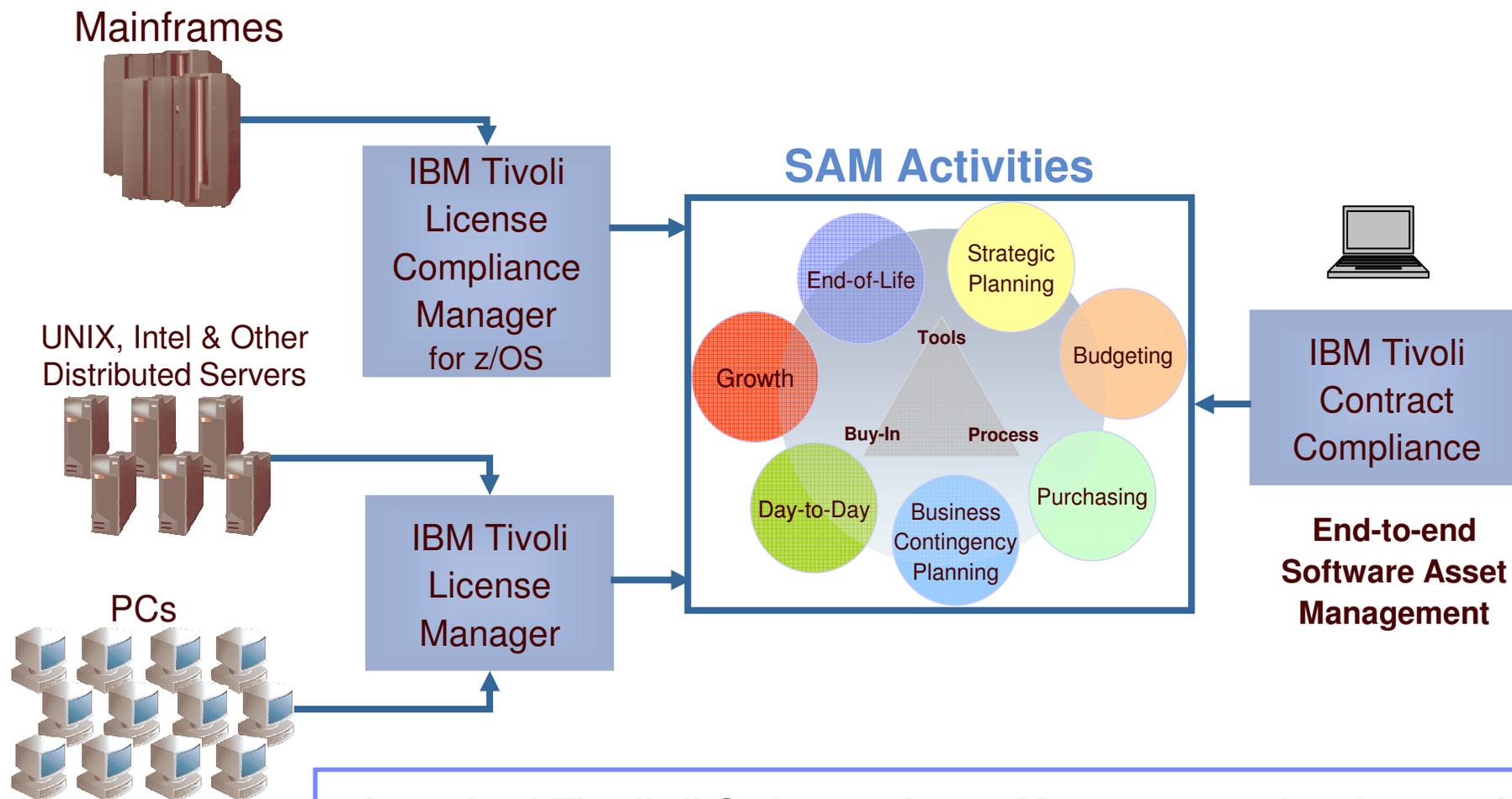
- Identificazione e riduzione di software di nessun o di scarso utilizzo.
- Il consolidamento efficiente dei Servers.
- Aggiornamento efficace del software e hardware.
- Forza nella negoziazione dei contratti con i Vendors.
- Riduzione dei costi del software attraverso sostituzione competitiva.
- Migliorare le prestazioni operative riducendo i costi di manutenzione
- Validazione della Fatturazione
- Charge-back efficace
- Progettare sistemi di Disaster recovery e business continuation

■ **Riduzione dei rischi di conformità**

- Software vendor license compliance audits.



End-to-End Software Asset Management



I prodotti Tivoli di Software Asset Management forniscono le informazioni necessarie per la corretta gestione del Software attraverso tutto il ciclo di vita.

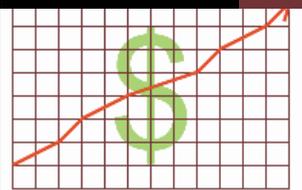
La disciplina SAM prevede.....

■ **Il Software Asset Management (SAM) è la disciplina commerciale attraverso la quale le società :**

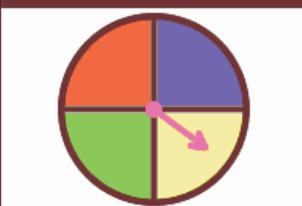
- Ottimizzano gli investimenti in Assets software tracciando e riconciliando l'inventario con l'installato.
- Misurano l'utilizzo dei prodotti.
- Integrano queste informazioni con dati di contratto e di licenze
- Soddisfano gli accordi contrattuali



Required Detail for Software Costs Analysis



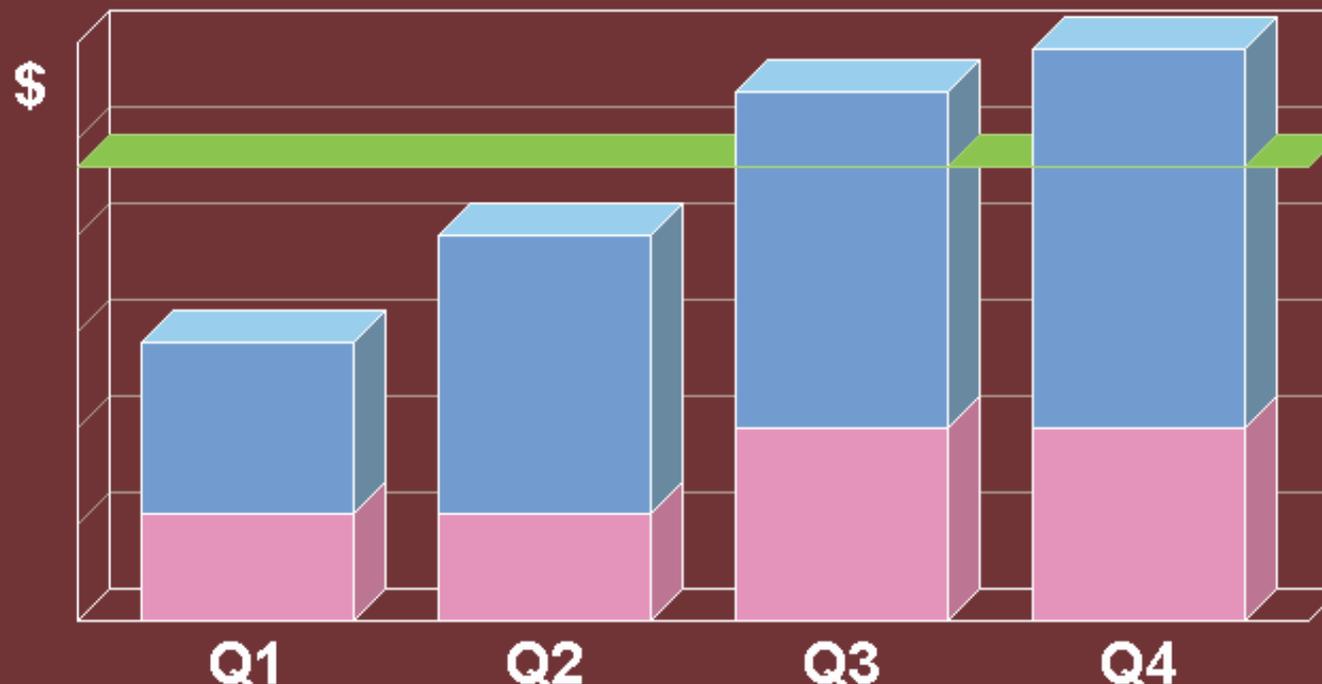
Soaring Software Costs



Changing Business Needs



IT Project Cancellations Due to Budget



To address the issues related to software costs, businesses require detailed analysis of software use. This includes information on software that is underutilized, as well as software that is being used cost effectively within the terms and conditions of the contract.

- Approved annual software budget (excluding new projects) 5% over last year
- Software that is being used cost effectively
- Software that is dramatically underutilized



Software che non è usato



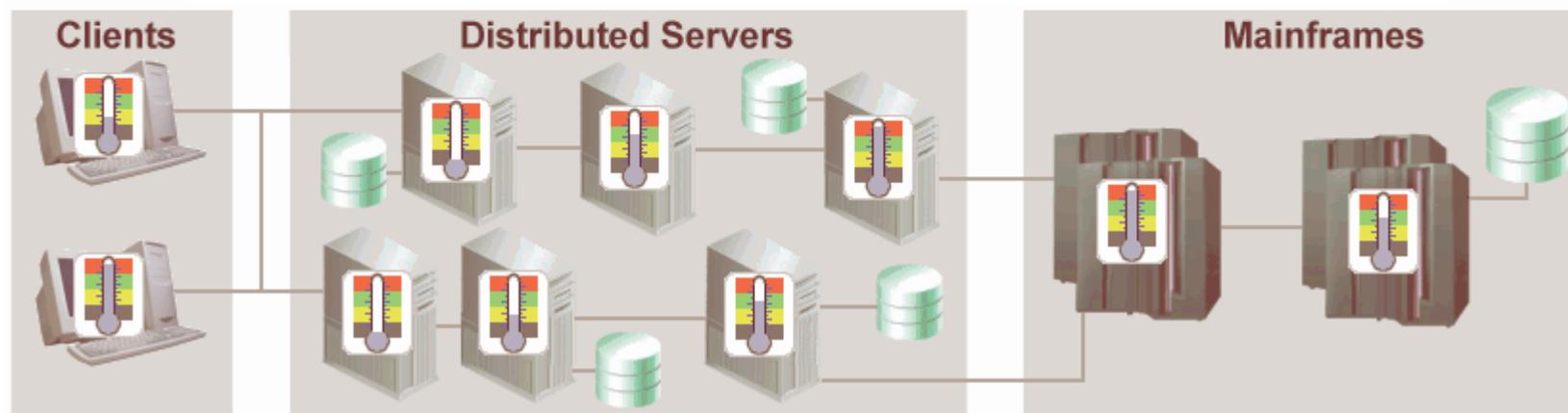
Software che è sotto utilizzato



Software utilizzato e allineato con I termini e le condizioni del contratto



Software il cui uso è non conforme ai termini e condizioni del contratto



ISOGON Vista 3.7.2 - TCCM

File Edit View Tools Help

New Open Delete

Vista

Views

View Management

Inventory Import

Import

Import Review

Reports

Charting

Administration

Custom Processes

View Management

Select a View from the list to display its details:

View name	Owner
Agreements with Invoices	Isogon
Agreements with Purchase Orders	Isogon
Agreements with Vendors	Isogon
Companies with Contacts and Events	Isogon
Hardware Agreements by Vendor	Isogon
Hardware by Software	Isogon
Hardware Capacity of Installed Software	Isogon
Hardware Inventory by Location with Agreements	Isogon
Installed Hardware by Company	Isogon
Installed Software with No Agreements by Hardware	Isogon
Installed Software with No Agreements by Vendor	Isogon
Installed Software with No Usage	Isogon
Product Location by Company and Hardware	Isogon
Software Agreements by Vendor with Usage	Isogon
Software Agreements with No Installed Software	Isogon
Software Agreements with No Usage	Isogon
Software Assets with Passwords	Isogon
Software by Location	Isogon
Software Inventory and Usage by Vendor (Sysplex and Library)	Isogon
Software Inventory by Hardware with Licensing	Isogon

View details - Installed Software with No Usage

Entities displayed in the tree:

- Location
 - Configuration
 - Installed Hardware Product
 - Partition
 - Company (Software Vendor)

Entity displayed in the list:

Installed Software Product

Properties displayed in the list:

(Name)
Total activity

Description:

This View is used to find out which mainframe software products are not being used. It displays all installed mainframe software products that do not show any usage.

Agreement(Software - Enterprise):CA ELA 2784

- ⊕ BOUTELL.com
- ⊕ Bradford L. Barrett
- ⊕ Brown University
- ⊕ BULL FREEWARE
- ⊖ CA
 - ⊖ CA ELA 2784
 - ⊖ CA ELA Payment Stream
 - ⊕ CA Fast Unload
 - ⊕ CA Utility Fast Check
 - ⊕ CA Utility Fast Index
 - ⊕ CA Utility Fast Load
 - ⊕ CA Utility Fast Recover
 - ⊕ CA-ACF2
 - ⊕ CA-Easytrieve Plus
 - ⊕ CA-Interstest
 - ⊕ CA-MICS
 - ⊖ Database Products Group
 - ⊕ CA Fast Unload
 - ⊕ CA Utility Fast Check
 - ⊕ CA Utility Fast Index
 - ⊕ CA Utility Fast Load
 - ⊕ CA Utility Fast Recover
 - ⊖ Systems Product Group
 - ⊕ CA Unicenter Products
 - ⊕ CA-ACF2
 - ⊕ CA-Easytrieve Plus
 - ⊕ CA-Interstest
 - ⊕ CA-MICS
- ⊕ Callisto Corp.
- ⊕ Candle

Partition	Total activity
SYSU	0
- Installed Software Product: CA-Easytrieve Plus DB2 (1 ite	
S99D	0
- Installed Software Product: CA-Easytrieve Plus IDMS (4 it	
SYSU	0
S44D	0
SYSX	0
S99D	0
- Installed Software Product: CA-Easytrieve Plus IMS (6 ite	
SYSU	0
SYSY	0
SYSX	0
S99D	0
S44D	0
DEV1	0
- Installed Software Product: CA-EASYTRIEVE PLUS v.9 (
SYSY	0
- Installed Software Product: CA-Easytrieve/Toolkit (2 item[
SYSY	0
SYSU	0
- Installed Software Product: CA-Interstest v.5 r.4 (1 item(s))	
SYSY	0
- Installed Software Product: Unicenter Bind Analyzer for D	
SYSX	0
SYSU	0
- Installed Software Product: Unicenter CA-11 Restart and	
S44D	0
S99D	0
- Installed Software Product: Unicenter CA-7 Job Managem	
S99D	0
S44D	0

Properties - CA ELA 2784

Categorized | List

(Name)	CA ELA 2784
(Type)	Software - Ente
(ID)	{25}
Contractual	
Commencement date	3/31/2003
Termination date	3/31/2006
Agreement status	Up for Renewal
Negotiator	Brian Miller
Contractual enterprise	
Agreement location	Contract File Ca
Agreement number	CA ELA 2784
Entity Links	
Company	CA
Organization	Acme World Ent
Addenda	(None)
Asset groups	(3 items)
Terms and Conditions	
Terms and pricing confiden...	(None)
Late payment penalty	
Acceptance?	No
Additional product discounts	35
Additional training discounts?	(None)
Audit provision	Annual
Cancellation notice	90 Days
Early termination	(None)
License assignability notice	60 Days

Termination date
The termination date of the agreement.

Step 3: Compare software inventory and use patterns to existing contracts



View: Software that hasn't been used

Action: Possible remediation includes moving or uninstalling applications with zero use

Asset Group(Software License Metrics):Micr	Asset ▲	(Type)	Installed Software Products	Properties - Microsoft SQL Server Metrics	
Acme World Enterprises	MS SQL Server	Software Asset	(96 items)		
+	ABC Solutions Agreement				
+	Access Interface HDS 325				
+	Allen ASG License				
+	Back-Up Site Lease				
+	Base HDS 325				
+	BMC Master SLA 713-01				
+	CA ELA 2784				
+	Compuware ELA 543				
+	Connect HDS 325				
+	Dell - New Laptops				
+	EMC DASD Lease				
+	EMC Maintenance				
+	Gateway Purchase				
+	Hard Software Lease				
+	HDS DASD Lease				
+	HDS Maintenance				
+	HDS Skyline Lease				
+	HP Pavilion Purchase				
+	HP Purchase				
+	IBM 129874				
+	IBM AIX Purchase				
+	IBM ESA 6321003				
+	Isogon Master Agreement				
+	McAfee Virus Software License				
+	Microsoft Master Agreement				
+	Microsoft Seats Agreement				
+	Microsoft Office Cost basis				
+	Microsoft SQL Server Metrics				
+	Microsoft Server Agreement				

Categorized		List
(Name)	Microsoft SQL Serv...	
(Type)	Software License M...	
(ID)	{182}	
Entity Links		
Purchase orders	(None)	
Invoices	(None)	
Agreement	Microsoft Seats Ag...	
Assets	(1 Item)	
Licensing		
Platform	Desktop	
Licensed unit	Seat	
Licensed unit capacity	150	
License type	Seat	
Vendor Pricing URL	http://www.micros...	
Licensed unit cost	USD 3,500.00	
Tier group		
WLC Licensing		
Product license certificate ...		
Defined capacity date		
Cost		
Additional licensed unit cost	USD 3,500.00	
Miscellaneous		
Comments	(None)	
Audit	(List)	

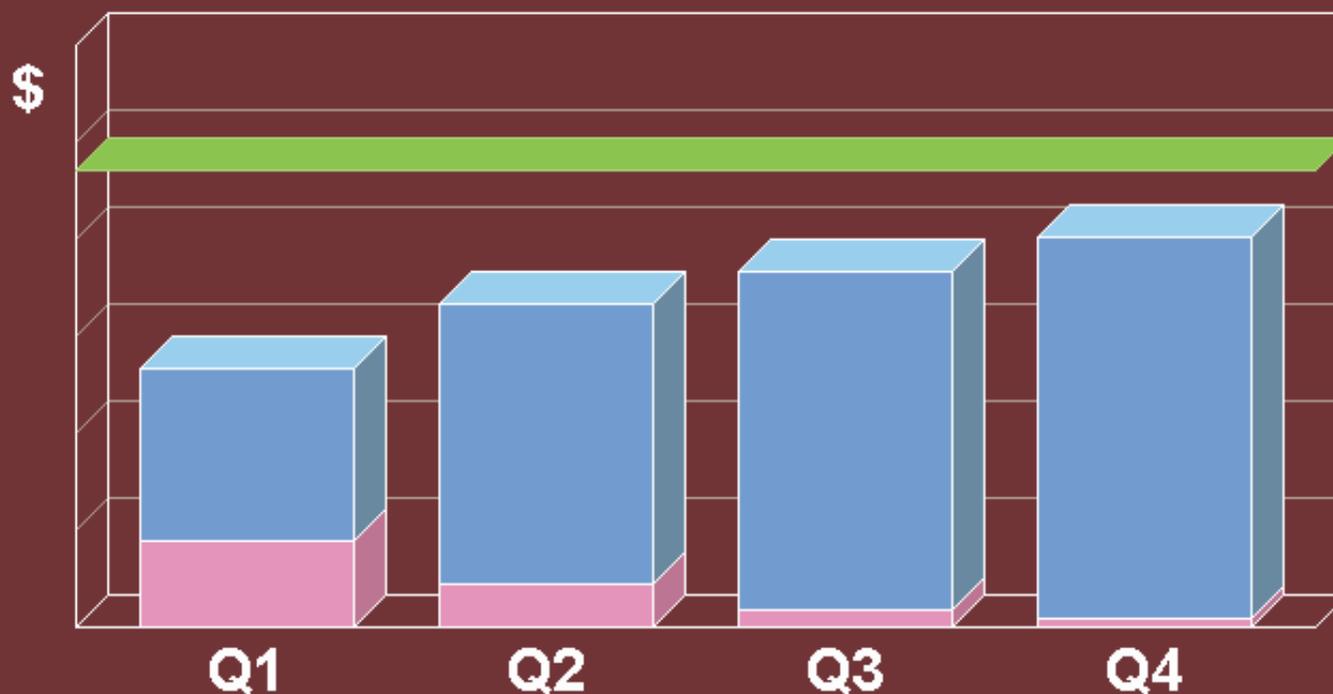
Step 3: Compare software inventory and use patterns to existing contracts



View: Dramatically underutilized software

Action: Costs could potentially be reduced by renegotiating terms of the software contract

With an IBM Tivoli End-to-End Software Asset Management Solution



IT software expenditures are now aligned with business priorities

- Software costs are being controlled
- Software expenditures are now based on business use
- Software is within contract compliance

- Approved annual software budget (excluding new projects) 5% over last year
- Software that is being used cost effectively
- Software that is dramatically underutilized

Views - Software Usage by Hardware Filter On

Location (City): Denver

- Acme World Enterprises
 - U.S.A.
 - Albany
 - Denver
 - Unspecified

Installed Software Product	Total acti..
CA-EASYTRIEVE PLUS v.9	15,719
CA-EASYTRIEVE PLUS v.9	328,557
CA-EASYTRIEVE PLUS v.9	159,562
CA-Interrest v.5 r.3	137,212
CA-Interrest v.5 r.3	348,603
CA-Interrest v.5 r.3	74
Ccbol for MVS & VM v.1 - 5688-197	1,021
Ccbol for MVS & VM v.1 - 5688-197	135
Ccbol for MVS & VM v.1 - 5688-197	171,933
DB2 Server for OS/390 v.5 - 5655-DB2	20,939
DB2 Server for OS/390 v.5 - 5655-DB2	0
DB2 Server for OS/390 v.5 - 5655-DB2	0
DB2 UDB for OS/390 v.6 - 5645-DB2	157,907
DB2 UDB for OS/390 v.6 - 5645-DB2	0
DB2 UDB for OS/390 v.6 - 5645-DB2	0
DFSORT	0
DFSORT	0
DFSORT	0
File-AID for DB2	573
File-AID for DB2	0
File-AID for DB2	0
File-AID v.8 r.6	0
File-AID v.8 r.6	20,987
File-AID v.8 r.6	16,221
File-Aid/Data Ager v.3	6

Properties - DB2 Server for OS/390 v.5 - 5655-DB2

Categorized List

(Name) DB2 Server for O...
 (Type) Mainframe Software

Entity Links

Partition Prod Sys C
 Libraries (1 Item)
 Cataloged Software Product DB2 Server for O...

Usage

First Encountered 3/14/2001
 Last Encountered 3/14/2001
 Usage start date 4/2/2000
 Usage end date 5/31/2000
 Total activity 28,939
 Batch Jobs 28,350
 Started Tasks 589
 TSO uses 0

Distiller import

Product Feature Code
 Product Enablement Status
 Unrecognized Product (None)

Miscellaneous

(Name)
 Identifies the item.

Software Variance

Enterprise: Acme World Enterprises
 From: 1/1/2004
 To: 12/31/2004

Software	Budgeted Expense (USD)	Actual Expense (USD)	Variance (USD)
Allen Systems Maintenance	6,000.00	6,000.00	0.00
DASD Manager Maintenance	222,092.00	232,092.00	(10,000.00)
CA ELA Payment Stream	854,000.00	854,000.00	0.00
IBM DB2 for OS/390	41,520.00	41,520.00	0.00
IBM DFSORT - R96	309.00		309.00
IBM DFSORT - YX6	232.00		232.00
IBM ISPF for MVS	11,458.00		11,458.00