

Basics of IT Financial Management

What you need to know and why

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Agenda

- IT Financial management's growing importance
- IT Financial Management Basics
 - Asset Management
 - Strategy and Financing
 - Planning and Budgeting
 - Cost Accounting
 - Actual versus Budget and Exception Handling
 - Reporting and Chargeback
 - Investment Analysis
- IBM's Financial Management Solution
- Closing and Discussion





The IT Management Imperatives



Plan your Financial Management Transformation Roadmap

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TRM

According to Gartner, most IT organizations today have a billing and chargeback solution that does not meet the customer's expectations

Today's challenge

"Getting Chargeback right isn't easy. Most of the Gartner EXP members have it in one form or another, but few are happy with what they have.

Chargeback identifies, allocates and recovers the costs of IT services, but it can lead to political tensions, investment setbacks and distorted use of IT services ..."

*Quote from "Gartner – EXP Chargeback"

Potential Solution

- Integrate established practices in process design and consulting with a strong software solution.
- 2. Install an IT Usage and Accounting Management product that:
 - Integrates IT Accounting and Chargeback
 - Acts as a virtualization engine component for metering
 - Feeds data into reporting tools and processes

Sample Real World Questions

- Do we have unused capacity and why are we adding more capacity?
- Is an upgrade really needed?
- Who is driving capacity needs and why?
- What happens if I change my chargeback structure to provide incentives for nonpeak utilization?
- What happens if I keep older technology beyond its maintenance period?
- What is the ROI of a new project?
- What is the ROI for new hardware?
- What is the ROI if I change software or move to a different OS or hardware platform?
- How do I know when an asset has reached its end of life? What should I do with that asset or resource?
- The business wants to expand a specific product line or service offering to other states.
 - What impact does that have on IT demands?
 - How much more capacity will be needed/used?
- The business is going to downsize a department or division.
 - What impact will that have on my current IT needs and demands?
 - Can those resources be used elsewhere when capacity is requested?



Definition of IT Financial Management (ITFM):

 ITIL* defines ITFM as "the process responsible for managing an IT service provider's budgeting, accounting and charging requirements"



IT Financial Management is the set of tools, processes and procedures that help organizations answer the following questions:

- What resources do we have today? (hardware, software, power, heating/cooling, floor space, people, etc.)
- How much of these resources are being utilized each day, month, quarter or year?
- Who is using these resources and at what level is that utilization?
- Does this utilization and current capacity demand align with stated business goals and direction?



Asset Management

Business Need

- Improve visibility and control of all IT assets through their lifecycle
- Obtain accurate asset data to enable appropriate and timely action across the business
- Accurate information about software inventory and usage in both distributed and mainframe environments

Business Drivers

- Identify and eliminate low use software
- Optimize software and hardware capacity upgrades
- Strong vendor contract negotiation leverage
- Manage all software regardless of platform
- Improve planning capability
- Improve asset utilization by extending it's life

Business Value Delivered

- Plan, Budget, Purchase, Analyze, Grow or End-of Life Software Asset Management
- Manage software inventory against contractual capacity through a GUI based system
- Reduce IT budget by accurate knowledge of current environment

"Enterprises that begin an asset management program experience up to a 30% reduction in costs the first year.. and continue savings of 5-10% for the next 5 years." - Gartner



Strategy and Financing

Business Need

 The activity of Strategy and Financing can be looked at via several different paths depending on the companies overall goal. The outcome of this exercise is to determine where you are now and where you would like to be tomorrow.

Business Drivers

- Is IT to be run as a business?
- Are you doing some sort of chargeback/showback today?
- If so, Is it fixed or variable and why this is important?
- Reduction of duplication of services (multiple email systems)
- Ensuring that we are tracking our costs accurately so that the revenue producing projects get resources they need.

Business Value Delivered

- By running IT as a business, whether for profit or not, will make you more competitive in the marketplace.
- If you are not doing chargeback today, is it in plan?
- By reduction of duplicate services, companies can show significant savings by the elimination of un needed resources.

Strategy and Financing

- No Chargeback
 - IT Department is overhead
- Overhead Allocation
 - Based on head count, assets, revenue, floor space, and so forth (not usage)
- Memo Record Billing
 - ▶ We don't do this, but if we did . . .
- Classic Chargeback
 - End of year budget charge . . . zero cost.
- Break Even (Year End Adjustment)
 - Same as Classic except budgets are charged monthly . . . zero cost.
- Budgeted Rates
 - See Rates for Year, Quarter, etc.
- Standard Rates and Negotiated Prices
 - Similar to other inter-divisional accounting practices. Cost and price are two different things. The IT Department is run like a business
- Functional Pricing
 - Instead of CPU time, or disk usage, users are charged for functional items such as orders entered, claims processed, and checks written



As described by Professor Brant Allen of the Colgate Darden School of Business at the University of Virginia:

Planning and Budgeting

Business Need

- Planning and Budgeting in our context is the activity ensuring that the correct financial budget is defined for the provision of IT services. (right sizing of IT spend)
- Obtain accurate asset data to enable appropriate and timely action across the business
- Accurate information about software inventory and usage in both distributed and mainframe environments

Business Drivers

- A means of delegating control and monitoring performance against predefined targets.
- Budgeting of IT services should be integrated with the overall corporate budgeting and with financial management policies and practices.

Business Value Delivered

- Plan, Budget, Purchase, Analyze, Grow or End-of Life Software Asset Management
- By understanding the question "How much of these resources are being utilized each day, month, quarter or year?". We can plan and budget based on cost centres and profit centres.



Budgeting Areas That Need to be Considered

- Server hardware & maintenance
- Storage
- Network, switches, routers, and cables
- Software
- Labor management, administration, development, operations, help desk, and support
- Power
- Floor space
- Development / Test
- Backup and disaster recovery



Cost Accounting

Business Need

- Cost accounting establishes budget and actual cost of IT delivery and the analysis of variances, and profitability.
- This is critical to understanding the True Costs vs. Perceived costs in your environment.



Business Drivers

 Service Owners use cost accounting to support decision-making to cut LOB costs and improve profitability.

Business Value Delivered

- As an insurance company, I need to balance DB transactions with speed <u>and</u> affordability
- As a manufacturer I need to ensure my car parts business, which is currently losing money is not consuming more recourses/costs than my aircraft business which is making money.

The "industry standard" starting point – establish a strong technology resource-based cost accounting system and then build upon that to a business service based or IT service based cost accounting system.



- Resources are the people and IT equipment, hardware and software.
- Business Services are the business units or volumes that result in resources being used and activities being performed.
- IT Services are all of the things done to carry out work related to the use and maintenance of IT resources and processes.
- Cost Pools are the components selected to quantify the cost and to account for costs.
- Billable Unit is the measured unit that is used to calculate the charge for either the resource, business item or activity being charged.

Typical Cost Allocations Use False Economics

- Rough estimates are used rather than true resource usage data
- Using linear costs rather than incremental costs for additional workloads
- Disproportionate or lack of allocation of all data center (e.g. power, labor) costs to the proper cost centers:
 - Server hardware
 - Storage
 - ▶ Network, routes, switches, cabling, etc.
 - Software
 - Labor management, administration, operations, help desk, and support
 - Power
 - Floor space
 - Development / Test
 - Backup and disaster recovery



Actual vs. Budget Tracking And Exception Handling

Business Need

 It will not be possible to estimate all of the costs and revenues accurately at budget time. This is critical to understanding the True Costs vs. Perceived costs in your environment.

Business Drivers

- The business needs change over time (projects change)
- Tariffs and costs may vary because of external factors outside of the organizations control (downturn in economy)
- Some costs may depend on Usage and metrics that evolve over time based on the companies direction (downsizing, growth...)

Business Value Delivered

 This is a great example of the need for a granular tracking of IT cost vs. Company direction. Company X needs to be able to respond if there is a sudden need to expand or contract IT consumption.



Reporting and Possibly Chargeback

Business Need

 Terminology in this area is key. Whether you are using a traditional Chargeback structure or what ITFM refers to as Show back, it is critical to understanding how a business can be profitable

Business Drivers

- Find out how many resources actually support an application and what that application costs to process a transaction vs. another possibly less expensive platform.
- Find out how what Business Units are the largest consumers of IT Resources

Business Value Delivered

- Control IT expenses
- Accurately Account for & Chargeback Resources
- Accurately allocate IT costs based on usage
- Audit Ability: Point and click trace to actual usage
- Flexible Invoicing:
- IT Costs, People Costs, Fixed Costs
- Provide monthly forecast vs. budget



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Investment Analysis

Business Need

 There is a direct relationship between investments and service level agreements/objectives. Generally, to improve service levels, higher costs may be necessary. ITFM provides advice and guidance to both IT and service owners on how consumption of IT resources effects the bottom line.

Business Drivers

- A granular IT management will allow for a stronger Investment Analysis by helping you answer:
 - Is my IT budget "right sized"
 - Is my current investment in SOA giving me the ROI I predicted?
 - Should I buy more Software/Hardware or can I further exploit what I currently have?

Business Value Delivered

- By having a solid ITFM foundation, You can answer these types of questions.
 - Should I be investing in FTE or automation?
 - "Automation is less expensive, and easier to get rid of should it not work out." CIO Manufacturer
 - Should I invest in additional hardware?
 - "I purchased Hardware at the top of the financial boom, what do I do with it now?" IT Manager Financial services firm





Accurate Cost Allocations Usually Show a Truer Picture of Costs and Aid **Investment Decisions**

- Best practice allocation is to use actual distributed and mainframe costs
- In this example, the mainframe allocation decreased from 71% to 40%

	Typical Allocation – Management Estimates				Best Practice Allocation – Actual Costs				
	Distributed	%	MF	%	Distributed	%	MF	%	
Power Cost	0	0	\$15,084	100	\$11,917	79	\$3,167	21	
Labor Cost	0	0	\$350,000	100	\$210,000	60	\$140,000	40	
Floor space	0	0	\$11,620	100	\$6,300	54	\$5,320	46	
Software OTC depreciation	\$120,240	60	\$102,472	40	\$216,194	97	\$6518	3	
Software S&S and MLC	\$168,783	50	\$168,783	50	\$181,242	54	\$156,325	46	
Hardware OTC depreciation	\$103,691	25	\$311,074	75	\$184,435	44	\$230,330	56	
Hardware Maintenance	\$20,276	25	\$60,829	75	\$37,151	46	\$43,953	54	
Network	0	0	\$4,758	100	\$ 4,758	100	\$0	0	
Total	\$412,990	29	\$1,024,620	71	\$851,997	60	\$585,613	40	
onthly allocation	Total \$1.437.610				Total \$1,437.610				

Sample monthly allocation

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"Without reliable data, you are just another person with an opinion."



Failure to Accurately Allocate and Distribute Costs can Lead to False Economics



When Developing Showback / Chargeback Models, Think Like A Utility Company

- Utilities are the model of a shared service chargeback
 - Electric, gas, telephone, cable
- Each utility bill has several components
 - Use electric bill as an example
 - Has data about usage (meter)
 - Measured in absolute units (kWh)
 - Includes fixed fees for service
 - Not based on usage
 - Includes delivery charges, taxes, etc. proportional to usage
- Each charge has an associated rate
 - Here, the metric is the same kWh

	Meter Information					
	Rate: 001 Meter #	Billing Period	Days	Meter Readings Previous Current	Reading Type	kWh Use
	88528141	May 24 - Jun 24	31	32990 33701	Actual	711
	Supplier Services	Detail				
	Generation Serv	ices Rate: Transit	ional St	andard Offer Serv	ice	
	Generation Services (FMCC-Generation Cho **Energy Adj Clause (Chg g Chg	711 kWh 711 kWh 711 kWh	X \$0.066350 X \$0.002530 X \$0.008160		\$47.174850 \$1.798830 \$5.801760
	Total Supplier Service	es				\$54.775440
	Delivery Services	Detail				
_	Distribution Rate	: 001				
	Transmission Charge Distribution Charges:	A Service of the serv	711 kWh	X \$0.005420		\$3.853620
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	Renewable Enrgy Inve	Mgmt Chg stmnt Chg	711 kWh 711 kWh	X \$0.002030 X \$0.000670		\$1.443330 \$0.476370
	***2005 CTA Refund		711 kWh	X \$0.004440CR		\$13.622760 \$3.156840CF

The rate varies for each bill component (each service)

IBM Tivoli Usage and Accounting Manager is ...

An integral part of an organization's management accounting and reporting system

(Shared Services, Reporting/Invoicing, ERP Integration, Product Profitability, Cost Allocations, Service Based Usage, Resource & Cost Trending, etc.)

Used across multiple platforms

(Including Mainframe, Unix, Linux, Windows, "Cloud", etc.)

Supporting multiple sub-systems

(DB2, Oracle, SQL Server, CICS, Virtualization, Energy, Web, E-Mail, Networks, Storage, Print Servers, etc.)

Internet enabled

(Web-Based Reporting & Drill-Down and multiple outputs)







Know What IT Costs!!!

USAGE DATA	IT FINANCIAL DATA									
Servers Mainframe, UNIX, Linux, Windows, System i, Etc. Databases DB2, Oracle, SQL Server, Etc. Core Systems CICS, Internet, E-mail, WebSphere, SAP, Print, Networks. Etc.	Supplier Invoice/Costs IBM Invoices HP Invoices EMC Invoices Dell Invoices	Budget Data Business Unit Data Cost Pool Data Application Data Forecasts Services Data	Service Costs Service Level Agreements Service Budget Metrics	Shared Services Costs Telecom Consulting Service Catalogs Fixed Assets						
Storage SANS, S Backup, HSM, F	itorage Mgr		100							
Service Extern Par	es al Feeds, 3rd ty Feeds, XLS Data, ower Consumption E Configuration & Ass Tivoli U Account	Data, Set Data Usage and ing Manager								
1	Knowledge of IT Costs									
V	isibility – Align IT Usage Based Service L Budget/A Discovery, C	Costs To The Bo d Cost Allocation evel Analysis, ctual, Trending, hargeback & Mo	usiness, is, pre							



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TUAM and Virtual Servers

TUAM can collect and report resource data from any combination of

- The virtual machine manager/hypervisor
- The operating system hosted on the virtual machine
- Applications hosted on the operating system within the virtual machine





Detail VMware

Account Range: All Accounts Date Range: 5/1/2006 to 5/31/2006

Account Code	VM ware CPU Usage	VMware CPU Usage Guaranteed	VM ware Disk Kilobytes Read	VMware Disk Kilobytes Written	VM ware Memory Kilobytes Active	VM ware Memory Kilobytes Granted	VMware Network Kilobytes Read	VM ware Network Kilobytes Transferred
ATM - ATM Transactions								
	60,940	309,648	44,186	22,740	61,567,961	538,701,536	15,488	66,219
CCX - Credit Card	32,940	316,807	75,743	25,939	47,804,496	323,615,668	59,813	567,798
COM - Commercial Loans								
DAC - Drafts and Collections	310,787	1,070,378	74,949	76,991	339,788,854	1,691,339,912	22,417	120,073
	16,576	123,328	7,839	11,699	29,095,887	215,481,272	1,723	8,780
DEP - Electronic Deposits	E8 0.40	270 554	14 630	11 614	27 221 207	251 202 909	2 146	22.202
MTG - Mortgages	50,949	2/9,334	14,628	11,014	37,321,207	231,392,000	5,140	23,203
	220,475	795,237	86,667	63,917	185,942,473	1,938,282,868	21,763	105,006
ONE - Online Electronic Payment	s			17 594				
RTM - Retirement	17,074	154,123	42,371	17,534	14,120,502	161,267,193	11,196	2,123
	444,417	515,898	134,759	63,255	122,419,670	1,042,730,216	14,588	155,275
SSI - Secure Sales - Internet Co	mmerce							
	154,264	959,894	147,728	29,185	127,079,399	1,833,819,572	133,883	136,530
TEL - Telephone Transactions	50,134	314,557	95,565	44,785	50,117,052	537,463,572	39,072	113,553
Run Total	1,366,556	4,839,424	724,435	367,659	1,015,257,501	8,534,094,617	323,089	1,298,640
	1,300,330	4,839,424	/24,435	307,039	1,015,257,501	8,534,094,617	323,089	1,298,640

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Equipment/Shared Services		TEL - Telephone Transactions	1.074.27	8.88%	
Credit Card		MTG - Mortgages	625.20	5.17%	
ATM Transactions		WTX - Wire transfers	520.03	4 30%	
Electronic Deposits		DAC - Drafts and Collections	439.60	3.63%	
Drafts and Collections			422.04	3.03%	
Commercial Loans		ATM ATM Terrentian	432.04	3.37%	
Unix Process Charges		AIM - AIM Iransactions	431.45	3.57%	
Telephone Transactions		COM - Commercial Loans	68.29	0.56%	
Mortgages		ONE - Online Electronic Payments	22.32	0.18%	
Commercial Loans		Total MS Windows Processes	12,094.19	>	
Unix Filesystem Unix Oracle Charges		Rate Group	Charge	<u>%</u>	
MS Windows Storage Charges		Total Equipment/Shared Services	3 977 00	10 16%	
MS Windows SQL Server		Tetal Laiv Desease Charges	10.76	0.05%	
• MS IIS		Total only Process Charges	19.76	0.05%	
MS Exchange Mailbox		Total Unix Filesystem	169.86	0.43%	
H: Mainframe Batch Charges		Total Unix Orade Charges	208.74	0.53%	
Mainframe TSO Charges		Total MS Windows Storage Charges	1,517.58	3.88%	
Mainframe Input/Output Charges		Total MS Windows SQL Server	1,164.82	2.97%	
Mainframe Printer/Reader Charges		Total MS IIS	5,625.21	14.37%	
Mainframe Storage Charges		Total MS Exchange Mailbox	17.40	0.04%	
Mainframe Print Charges Mainframe CICS Charges		Total MS Windows Processes	12,094.19	30.89%	
Mainframe DB2 Charges		Total Mainframe Batch Charges	7,522.01	19.21%	
		Total Mainframe TSO Charges	2,186.31	5.58%	
		Total Mainframe Input/Output Charges	580.89	1.48%	
		Total Mainframe Printer/Reader Charges	75.76	0.19%	
		Total Mainframe Storage Charges	2,303.00	5.88%	
		Total Majoframe Print Charges	-,	0.00%	
		Total Mainframe (70% Charges	1 600 90	4.339/	
		The law is for a pape of	1,050.00	4.32%	
		Total Mainframe DB2 Charges	0.00	0.00%	
		Run Total	39,154.8 3		

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E rdetr002	Usage and Accounting Manager				0		DM.		
ATM - ATM Transactions									
−	Detail By UNIX Filesystem								
	Account Range: All Accounts								
⊕ DAC - Drafts and Collections	Billing Period: 07/01/2007 to 07/31/2007								
	Assess to de	UNIX Filesystem	UNIX Filesystem	UNIX Filesystem	UNIX Filesystem	UNIX Filesystem			
	Account code	Blocks)	Byte Blocks)	Number of Files	Size (GB Days)	Used (GB Days)			
	SYSTEM_ID								
SSI - Secure Sales - Internet Commerice	ATM - ATM Transactions	1,863,896,148.0	1,001,448,830.0	5,973,621	889	478	.00	.00	.00
	D	0	0						
		1,223,589,888.0 0	584,352,528.00	2,140,444	583	279	.00	.00	.00
	🛨 roxie	461,296,320.00	344,309,638.00	2,943,176	220	164	.00	.00	.00 📃
	⊞ ruff	179,009,940.00	72,786,664.00	890,001	85	35	.00	.00	.00
	CCX - Credit Card	122,691,738.00	90,267,251.00	1,129,651	59	43	.00	.00	.00
	⊞ dawg	58,191,420.00	49,612,027.00	505,573	28	24	.00	.00	.00
	⊞ deptdog	5,425,218.00	3,500,722.00	76,357	з	2	.00	.00	.00
	⊞ odie	59,075,100.00	37,154,502.00	547,721	28	18	.00	.00	.00
	COM - Commercial Loans	541,488,960.00	244,375,751.00	2,251,782	258	117	.00	.00	.00
	⊞ stimpy	487,667,520.00	208,087,226.00	1,820,495	233	99	.00	.00	.00
	🕀 underdog	53,821,440.00	36,288,525.00	431,287	26	17	.00	.00	.00
	DAC - Drafts and Collections	130,940,928.00	102,000,911.00	822,435	62	49	.00	.00	.00
	⊞ eddie	130,940,928.00	102,000,911.00	822,435	62	49	.00	.00	.00
	MTG - Mortgages	2,563,526,712.0 0	1,053,501,911.0 0	5,824,097	1,222	502	.00	.00	.00
	± daisy	122,596,320.00	40,240,906.00	488,274	59	19	.00	.00	.00
	⊞ deptdog	26,019,792.00	10,375,679.00	351,714	12	5	.00	.00	.00
	[]] duke	110,437,440.00	40,510,044.00	906,417	53	19	.00	.00	.00
	🗄 garfield	2,304,473,160.0 0	962,375,282.00	4,077,692	1,099	459	.00	.00	.00
	ONE - Online Electronic Payments	715,155,120.00	240,110,490.00	4,834,315	341	114	.00	.00	.00
	⊞ mickey	232,243,200.00	67,016,418.00	766,988	111	32	.00	.00	.00
	⊞ woody	482,911,920.00	173,094,072.00	4,067,327	230	83	.00	.00	.00
	RTM - Retirement	1,411,172,742.0 0	345,880,212.00	2,075,590	673	165	.00	.00	.00
	⊞ goofy	112,084,362.00	65,690,642.00	720,134	53	31	.00	.00	.00
	🛨 ralph	56,762,580.00	43,361,300.00	636,427	27	21	.00	.00	.00 💌
Done .									Internet



IBM Tivoli Usage and Accounting Manager



Report chart

(Partial list of categories)

- Budget Analysis Reports
- Database Reports
- E-Mail Reports
- Hog Reports
- Internet Reports
- Invoices
- Network Reports

- Operating System Reports
- Print Reports
- Resource Usage Reports
- Storage Reports
- Top 10 Resource Hogs
- YTD Reports

Some of the over 280 customers

Large healthcare insurer

- CICS/DB2/Batch/TSO & normalization between 2 System zs. Rolled out Unix and Windows. Over 168 Unix and 300 Windows Servers.
- Replaced 2 homegrown systems after merger. Corp. finance is the user and owner of the system. Wanted federated auditability. TUAM only product to meet all RFP requirements.

Insurance and Financial Product Broker

- z/OS, Linux for System z & Unix/Novell/Windows. Primavera importing for labor accounting. Inventory information, SAN, and Telcom.
- Doing memo billing now and will move to chargeback in the future.

Large aerospace manufacturer

- Both z/OS & distributed. Bill \$18-20M per month across 5,000 cost centers. 40K pieces of hardware. Do labor, WAN, assessments, and project costs. Feeding SAP GL and using Web reporting.
- Replaced homegrown system.

US Department of Interior

- First Federal cloud service for application developers using Linux on z, Tivoli Service Automation, and TUAM for service billing
- Wanted to raise reduce cost of services, increase resource sharing, and increase staff productivity through automation



TUAM capabilities can help realize immediate benefits

Increase Client (Business Units) Satisfaction

- Real Usage = Accurate Reporting
- Accountability = Improved services
- Alignment between Business and IT costs

Lower Infrastructure Cost

- Reduced server sprawl
- Higher utilization
- Rationalization of resources
- Continued Infrastructure Improvement understanding total costs of ownership and operation can lead to:
 - Improved managing of costs
 - Usage comparisons can lead to more effective investments

For More TUAM Information



When running a business, nothing matters more than knowing how much something costs.

You can't manage what you don't measure!

End of Presentation

Thanks United States Obrigado Dankschen Austria Portugal Takk7hank YouNorwayUnited Kingdom Danke **Bedankt** Tak Germany Netherlands Denmark *Merci* Engraziel Dekuju Switzerland **Czech Republic** France Tesekkür ederim Tack Dank u Belgium Turkey Sweden Jag tackar Dakujem Grazie Finland Italy Slovakia Спасибо Russia

Gracias

Spain