

TEM, WEM and MMS Programs: Developing a Sustainable ROI, Cost Justification and Business Case



Telecom Expense Management
Industry Association

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Executive Summary

This paper focuses on developing a sustainable, Return on Investment (ROI), cost justification and business case for Telecom Expense Management (TEM), Wireless Expense Management (WEM), and Managed Mobility Services (MMS). Programs that rely solely on “hard dollar” refunds for billing errors, cost savings and ROI are incomplete. They fail to consider additional benefits.

Most organizations have a difficult time quantifying and/or reporting on productivity benefits from increased bandwidth, better mobile devices, and other benefits of these programs. TEM providers can help establish a baseline performance metric and identify increases to capacity. Many tasks associated with TEM, WEM and MMS may have been neglected, before the program(s) was/were implemented, leading to higher costs or wasteful spending on telecom services. The checklist of activities on page six will help Solutions Providers work with enterprises to create these metrics and understand the true costs of the current environment.

In addition, TEM and WEM programs no longer focus exclusively on telecom expenses. Many programs are addressing technology expenses and management of data security. With convergence of telecom and IT and mobile offerings, expansion into IT and security was a natural extension. In turn, the traditional focus of justifying these programs solely on cost savings is too limiting.

A sustainable ROI, cost justification or business case must also consider the environment and costs prior to implementation. Often there is no baseline of telecom expenses and operational costs associated with managing telecom. An accurate record of the costs before implementation of the program is essential to prove the program reduced expenses. In addition, the network may have changed with:

- Growth - new subsidiaries, additional site locations, more employees, etc
- Capacity - adding additional bandwidth at locations

Solution providers and enterprises may use different names for these categories, but the business case for TEM, WEM and MMS programs falls into four main categories:

- Telecom Savings
- Labor Efficiencies
- Indirect Savings
- Security Compliance

This paper will help enterprises that already have a TEM, WEM, and/or a MMS program(s); as well as those enterprises that are starting to see the need for these programs. To simplify things in this paper the services and software included in Mobile Device Management (MDM), Mobile Application Management (MAM), Managed Mobility Services (MMS) and Enterprise Mobility Management (EMM) roll up under the term MMS. More detail for the specific capabilities on these offerings is listed below.

TEMIA's mission is to raise awareness and knowledge of the benefits of TEM, WEM and MMS solutions. TEMIA seeks to improve the quality and value of solutions through the development and promotion of open industry standards. TEMIA and its members have authored this paper. TEMIA is a nonprofit association, which receives its funding primarily from Solutions Providers.

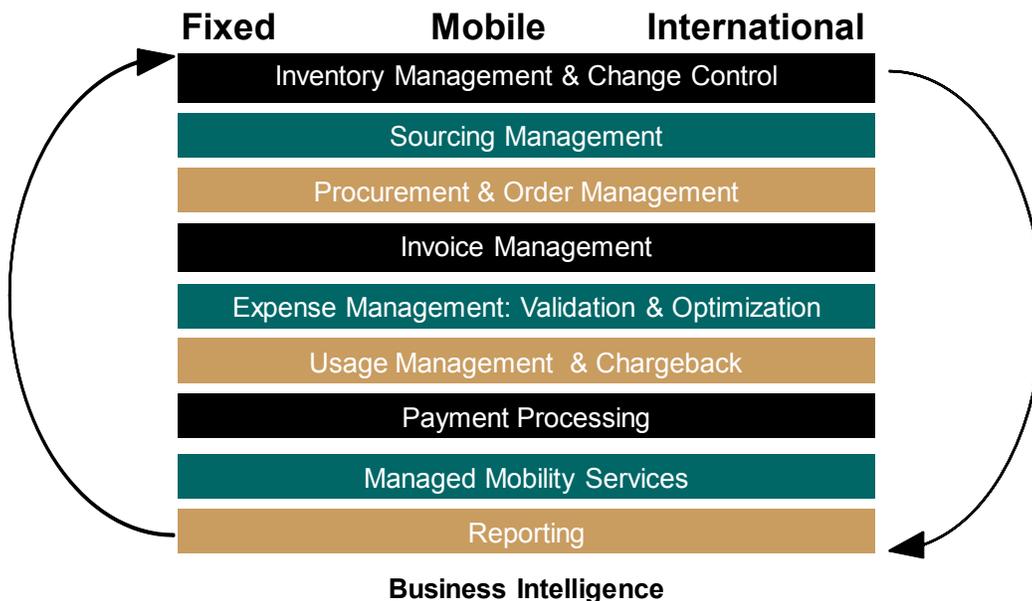
What is Telecom Expense Management?

Before enterprises start to develop their ROI, cost justification and business case it is important to understand TEM, WEM and MMS programs, areas where offerings may overlap and the areas that are unique to each. TEM programs proactively reduce expenses, introduce new efficiencies, increase visibility, provide better control for telecom (fixed and mobile voice and data) services and help improve security compliance.

TEM has ten major focus areas in its lifecycle:

1. Inventory Management and Change Control
2. Sourcing Management
3. Procurement and Order Management
4. Invoice management
5. Expense Management: Validation and Optimization
6. Usage Management and Chargeback
7. Payment Processing
8. Managed Mobility Services
9. Reporting
10. Business Intelligence

TEM Components



Sourcing and expense management use inventory for optimization, bill validation and usage charge-back. Change control refers to tracking, management and control of Move Add Change and Disconnect (MACD) activity. Tracking MACD activity is critical because the inventory is a moving target. Bills may contain disconnected items so savings in one area may help drive additional savings in other areas or it may reduce the savings from other categories. It is also important to recognize that telecom management requires specialized technology, people and processes to drive better results.

- **Inventory Management and Change Control**

TEM inventory consists of inventory elements such as any item that appears on a bill or customer service record (CSR) for a line, circuit, mobile line, or service provided by a telecom service provider. This is different from a comprehensive inventory, which includes items that do not appear on bills.

Some TEM Solutions Providers will go a step further adding telecom assets that do not appear on carrier bills. This could include mobile accessories, mobile software licenses, routers, network hardware and other customer premise equipment (CPE). Equipment, especially the maintenance on CPE for a managed services network, will have invoices from Cisco, Avaya, and other managed network service providers. This expanded inventory offers opportunities for asset management, sourcing, validation, optimization, cost allocation, budgeting and reporting. There may also be opportunities to manage maintenance charges or find value in redeploying inventory when employees leave or sites are closed. Since carriers do not usually sell them, these items are usually not on Customer Service Records (CSRs). In addition, most international service providers do not use CSRs, and CSRs do capture information regarding wireless devices and mobile services. For enterprises that seek complete management of all telecom and network assets, it is important to understand how the information will be captured and who will be responsible for verifying its accuracy, entering data into the database and managing ongoing cost management functions.

Wireless inventories require additional information for optimization and other Wireless Expense Management (WEM) functions. Inventory for mobile devices should include:

- Employee name or identification number
- Employee Status (active or no longer working for firm)
- Job role/function, department, general ledger code and cost center
- Employee location, region and country
- Mobile phone number
- Mobile Service Provider
- Plan activation and contract expiration date
- Device model number
- International Mobile Equipment Identity (IMEI number)
- Eligibility date for new hardware that is subsidized or free
- Services: voice, texting, data, international use
- How the bill is paid (direct by company, reimbursement, stipend)

- **Sourcing Management**

Sourcing includes negotiation of contract rates, terms, special pricing and conditions. A TEM solution should provide monitoring of contract performance, and proactive notice of contract expirations at preset intervals.

- **Procurement and Order Management**

Procurement and order management enables enterprises to enter orders, manage workflow for the approval of orders, and placement of orders with providers through a portal or service. Fulfillment of orders includes tracking order milestones and escalation if promised delivery dates are missed. Many TEM solutions offer these portals and services as a part of their solution to automate the workflow.

- **Invoice Management**

Invoice Management automates the manual labor-intensive process of receiving paper invoices. It includes conversion of paper billing to electronic media and software to centralize processing and management of bills. Carrier billing is highly complex with a wide range of services, special features and line items. A lack of standards for Telecom billing makes it difficult for organizations to process bills in electronic format without custom software. Automation and conversion of bills to electronic media reduces the costs of manually processing paper bills, avoids data entry errors and streamlines the time to process bills.

- **Expense Management: Validation and Optimization**

Expense management includes validation of expenses and optimization of charges. Bill validation should include reconciliation to contracts, tariffs, and inventory. MACD activity must be reconciled with billing. This step includes identification of billing errors and overcharges, documentation and filing of claims with Telecom Service Providers.

Optimization of enterprises' communications infrastructure and network expenses provide savings through cost avoidance. Savings come from reconciliation of usage and services with reduction from unused or underutilized lines and services; identification of services that do not have a contract or those that have uncompetitive contracts; finding inactive lines and circuits; analysis of equipment leases; and grooming of services to higher capacity lower cost services.

- **Usage Management and Chargeback**

TEM programs promote accountability for the service consumption and visibility through expense chargeback. The level of detail for chargeback can include call detail tracking.

- **Payment Processing**

A number of TEM Solution Providers refer to the step of batching and submission of bills to the customer as payment when the customer is actually making the payment to the service provider. In other cases, the supplier is actually referring to paying the bills on behalf of its customers. In this case, the TEM Solution Provider establishes an account for the customer to transfer funds and pay Telecom Service Providers on behalf of the customer.

Regardless of which approach is selected, TEM Solutions Providers can offer automated communication with the client's accounting system. The program should also include a feed that allows for tracking the invoice payment date, the amount that was paid, the name of the Service Provider, the address or account that received the funds and when the funds cleared.

- **Managed Mobility Services**

MMS Systems and Services focus on sourcing and logistics management, mobile service management, device and system management. The key to managing this process is in consistent and actionable reporting, as explained below.

- **Reporting**

Reporting provides detailed information on telecom expenses and budgets. The data should be available in a usable format that is readily accessible to managers. Effective reporting will help provide dashboard information in a graphical format with trending for expenses, allowing managers to take action based on the data.

Fixed, Mobile and International – What is the Scope?

Enterprises need to determine if the TEM project will include domestic wireline, wireless, and/or international expenses. With Wireless Expense Management, enterprises must balance expense management with expectations of employees for mobile services that will help make them more productive and help desk support. Multi-national enterprises may seek to expand the program to manage international telecom expenses.

The three areas of fixed, mobile and international telecom expenses have challenges unique to each discipline. Telecom Service Providers use different billing systems for each discipline because regulations and revenue models vary for each of these services. Enterprises may also have different groups that manage these three areas.

What is Wireless Expense Management?

Wireless Expense Management or WEM focuses on mobile expenses. TEM programs can include wireless expenses, but there are some areas of specialization for mobile programs. First, WEM programs' inventory management and change control rely on employee portals for procurement and fulfillment of devices and service plans to manage on-boarding and off-boarding of employees. A standard TEM program may offer a portal that is only used by a select group of enterprise TEM managers, but WEM strives to cast a wider net for stakeholders. In addition, WEM programs help automate the process of determining who is eligible for corporate paid plans and replacement devices.

Expense management for wireless services saves organizations money by focusing on ongoing optimization of voice minutes, data plans, continual monitoring of new rate plans and selection of the best plans based on usage patterns. WEM Providers may also source the best contracts and manage a competitive bidding process with carriers. Invoice processing for mobile devices can even identify zero use devices which should be disconnected or suspended. Similar to TEM programs, the invoice processing will also include steps to allocate costs and report usage to bring accountability for service consumption. WEM Solutions Providers present a batch file of invoices that are ready for payment; upon approval by the enterprise the solutions provider can pay on behalf of the enterprise, or the enterprise can pay the bill and provide a feed back to the provider to track payments.

What is MDM, MAM, EMM and MMS?

TEM and WEM focus on expense management. Mobile Device Management (MDM), Mobile Application Management (MAM), Managed Mobility Services (MMS) and Enterprise Mobility Management (EMM) suites strive to manage the full-lifecycle of deploying and supporting mobile devices, security.

1. **Mobile Device Management (MDM)** software secures, monitors, manages and supports mobile devices deployed across mobile operators, service providers and enterprises. MDM functionality includes:
 - Over-the-air distribution of applications, updates, Diagnostics
 - Remote Configuration and Provisioning
 - Security
 - Backup/Restore
 - Network Usage and Support
 - Server Deployment
 - Mobile Asset Inventory Tracking and Management
 - Remote Lock and Wipe
 - Device Provisioning
 - Software Installation
 - Troubleshooting and Diagnostic Tools
 - Management of Mobile Application Policy (white listing black listing and blocking apps)
 - Logging and Reporting
 - Remote Administration
 - GPS Tracking and 'Breadcrumb' Mapping
2. **MAM software and services** provision and control access to mobile apps on both company-provided and “bring your own” smartphones and tablet computers.
3. **Enterprise mobility management (EMM)** suites consist of policy and configuration management tools and a management overlay for applications and content intended for mobile devices based on smartphone OS. They are an evolution from previous-generation mobile device management (MDM) products that lacked application and content management. IT organizations and service providers use EMM suites to deliver IT support to mobile end users and maintain security policies.

EMM suites provide the following core functions:

 - Hardware inventory
 - Application inventory
 - OS configuration management
 - Mobile app deployment, updating and removal
 - Mobile app configuration and policy management
 - Remote view and control for troubleshooting
 - Execution of remote actions, such as remote wipe
 - Mobile content management

4. **MMS Systems and Services** focus on

- Sourcing and logistics management to purchase, provision and activate carrier services, devices and applications for corporate liable and BYOD plans
- Mobile service management, including Inventory network contracts and endpoints
- Proactively manage usage for roaming
- Device and system management
- Make device-specific information visible to stakeholders
- Measure device performance and health
- Manage and optimize connection options (cellular, hot spot and Wi-Fi)
- Help desk for service

MMS programs may offer some audit and optimization capabilities for mobile spending, but they rarely offer the comprehensive capabilities of WEM programs. They also don't help with fixed or wireline expenses. Many of the EMM capabilities do not have a direct tie into cost savings the way that TEM and WEM focus on these areas.

Enterprises see value and are able to build a business case for MDM, MAM, EMM and MMS offerings based on security compliance, indirect savings on IT capabilities and labor efficiencies. Organizations may use some or all of these features, depending on how employees use communications, and the requirements to manage security and level of its fixed and mobile spending.

While TEM, WEM and MMS offerings have some areas that overlap, unless an enterprises is using three different providers, clients do not pay for any overlapping capabilities. A supplier will simply use different modules so there is no duplication of effort to meet the clients' needs.

The table on the next page will help enterprises discuss cost justification and the business case of a TEM, WEM, and/or MMS program.

TEM WEM MMS Business Case/Cost Justification/ROI

An effective business case and justification will help to ensure the program has ongoing support and secure funding. The justification falls into four main categories:

- Telecom Savings
- Labor Efficiencies
- Indirect Savings
- Security Compliance

The table below provides conversation-starters and baseline numbers on this topic:

Savings Category	Potential Savings
Spending less on telecom services	
A. Recovery of refunds for billing errors	
1) Audit and recovery of billing overcharges	2% - 15% of expenses
2) MACD reconciliation and recovery of billing overcharges	
B. Cost avoidance by reducing future spending	
1) Strategic Sourcing: better contracts and rates	5%-25%
2) Inventory management	5%- 30% of expenses
a) Wireline optimization higher capacity lower cost services	
b) Elimination of unused services	
3) Optimization	
a) Wireless service optimization of voice and data match consumption to plans (dynamic updates as plans change)	
b) Identification of services with no contracts, receiving better rates through quote requests and negotiation	
c) MARC (minimum annual revenue commitment) penalty avoidance	Depends on MARCs
4) Accountability chargeback visibility, reporting on usage	1%-3% of expenses
5) Elimination of late payment penalties and service disruption for late payments, nonpayment, or lost bills	.5-2% of expenses subject to penalties
Labor efficiencies automating manual processes or outsourcing	
A. Automating procurement processes	FTE reallocation or FTE cost – BPO cost
B. Automating inventory management	FTE reallocation
C. Consolidation of invoices to reduce the volume of payments	FTE reallocation
D. Automating invoice management and validation	FTE reallocation
E. Automating usage chargeback and reporting	FTE reallocation
F. Reducing help desk support	FTE reallocation or FTE cost – BPO cost
Indirect savings	
A. Consistent application of procurement policies	1%-5% of expenses
B. Unifying processes and improving collaboration	1%-3% of expenses
C. Better information for improved decisions	benefit from better decisions
D. Freeing working capital - reconciliation with Accounts Payable	cost of funds X savings
E. Redirecting staff to focus on income producing projects and areas where they add more value	income or value from new activities
Security	
A. Security enhancements and risk mitigation	Likelihood of breach X cost of lawsuit or penalties
B. Application of mobile policy and accounting rules globally	
C. Compliance to mobile policy and each country's regulations	

The likelihood that a TEM or WEM program will produce savings to justify its expenses depends on the complexity of the telecom contracts, the amount of Move Add Change, and Disconnect (MACD) activity, quality of historical records and telecom services required for business activities. Controls the enterprise has prior to implementing the program will also impact historic audits and future savings.

Initial savings from a historic audit and optimizations in the first year may be larger than future years because billing errors and inefficiencies have accumulated over time. After the program has been implemented, proactive measures will be in place to catch billing errors. In addition, control procedures and automation to reference contracts when orders are placed will help reduce billing errors. If the program is being managed properly, “justification” or success shouldn’t be measured solely from the number of billing submissions or claims made on behalf of the client, credits or refunds that have been received from carriers. If the program is being run properly, these items will decline as proactive measures are implemented.

For cost avoidance, enterprises need to align savings calculations with corporate policies and a practical approach on how to recognize these benefits. The CFO or finance department may have precise rules for recognition and reporting of those savings. There are several different approaches for calculating savings:

- Savings for the budget year
- Savings for the calendar year
- Savings for the term of the contract
- Savings for a rolling 12-month term

The budget year or calendar year approach may create incentives to maximize the savings calculations by timing receipt or recognition of savings to the start of the budget. Using a calendar year approach to calculating savings would mean that a cost savings counts for just one month in December. In January the same cost savings issue could count for 12 months. A rolling 12 month term for calculating savings avoids the issue of incentives that lead to “finding” savings in January each year. Telecom, IT, CFOs/finance departments and the TEM provider must work together to determine how savings will be calculated and reported.

Ultimately, the cost justification should focus on areas that add value for the organization. Cost avoidance savings are an important part of justifying a program and evaluating its ongoing performance. Labor efficiencies, indirect savings and security considerations are also important considerations for the business case.

It is also important to consider the cost of not acting or delayed action. With telecommunications and IT expenses, there are costs for not acting because carrier contracts often limit the period of time in which customers can file claims for refunds. The statute of limitations for refunds is typically 6 months for long distance services and two years for local billing. Increasingly, telecom Service Provider Contracts are setting more stringent limits on the time to file a claim for a billing error.

TEM, WEM, MMS Baseline Assessment

This table can be used to identify costs and gain insights into your current TEM, WEM, and MMS environments.

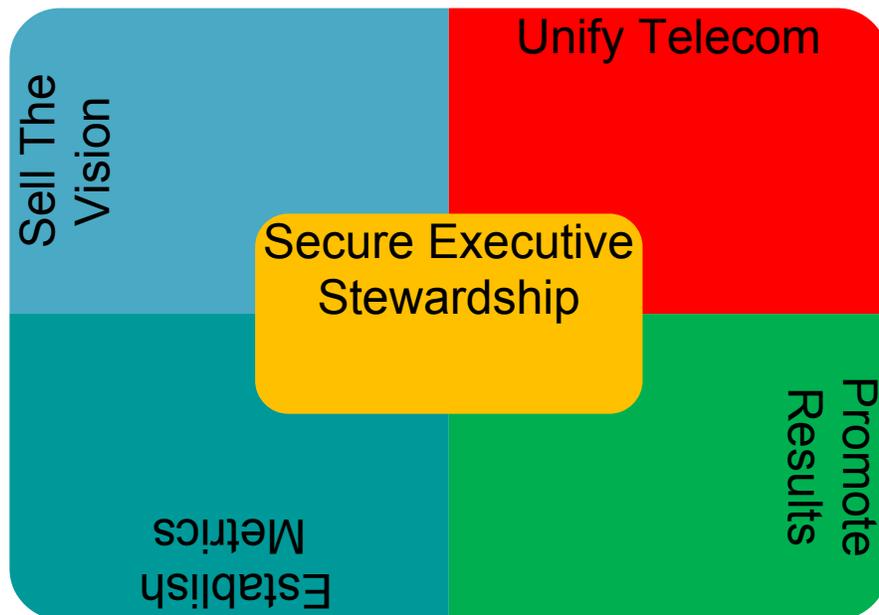
Identifying Your Costs	Currently Doing? Yes/No	If Yes, Approx Hourly Compensation	Total Hours Spent Monthly for Task	Total Comp Cost
Procurement: Moves, Adds, Changes Disconnects				
On Boarding off Boarding Employees' Devices, and other entitlements				
Help Desk for Fixed and Mobile Telecom				
Management of MACD status inquiries				
Management of warranties and device replacement				
Assistance with device issues battery, apps, etc.				
Inventory Management & Change Control				
Identification & Suspension of Zero Use Devices				
Identification optimization of fixed wireline and mobile services no longer in use				
Invoice Management				
Invoice Receipt & Log In				
Identification of Missing Invoices				
Reviewing/Approving Bills for Payment				
Determining Short Pay Amounts (late fee, etc.)				
Management Reporting				
Responding to Ad-Hoc queries				
Database/Spreadsheet Management				
Invoice Allocation & Approval Activities				
Expense Management Validation & Optimization				
Reviewing Rate, Tariff, Contract Compliance				
Researching Abusive/Fraudulent Charges				
Researching Unidentified Billed Items				
Implementing Claims to Vendors re Erroneous /billing				
Negotiating Refunds and Credits w/ Vendor				
Analyzing Monthly Variances				
Allocating One Time Charges				
Verifying Late Payment Charges				
Audit Validation & Reconciliation Activities				
Usage Management & Chargeback				
Reviewing & Allocating of Bills				
Generation of Accrual Reports				
Solution of User Allocation Disputes				

Payment Activities				
Personnel Data Entry into Financial System				
Electronic Upload to GL				
Allocation of Charges				
Invoice Remittance				
Reconciling Vendor Payments				
Researching and Responding to Bill Queries				
Payment Activities				
Reporting				
Development of standard, custom and ad hoc reports				
Review report accuracy				
Archiving data for historical reference				
Administrative Activities				
Administrative and clerical support				
IS Maintenance and support				
Admin Activity TOTAL:		If Yes, Approx Hourly Compensation	Total Hours Spent Monthly for Task	Total Comp

Critical Areas to Create the Business Case

Below are five critical areas to gain executive commitment and create the business case for the program.

1. Sell the vision of how TEM, WEM and MMS programs can positively impact the organization and potentially transform it.
2. Unify telecommunications technology under one department or steering committee.
3. Establish metrics to measure performance gains from TEM, WEM and MMS programs.
4. Promote the results that TEM, WEM and MMS programs produces.



1. **Sell the vision** for ways that TEM, WEM and MMS programs can positively impact the organization and potentially transform it. Managers should learn how other firms are deploying technology. Let solutions providers know the goal is to find ways to transform business processes and provide new ways of doing business. Telecom managers should identify these goals and their impact to help attract executive interest.

2. **Unify management of telecommunications** technology under one department or steering committee. Many organizations have decentralized management of their telecommunications infrastructure. A decentralized approach can lead to problems where mobile applications and other technology do not integrate with network infrastructure and backend systems. While some corporate cultures and executives may resist creating a new department or unifying the program, a steering committee can help to unify the effort.

Regular meetings with peers can help provide visibility into different initiatives. In some cases, different groups have their own agenda; it is therefore important to align these different priorities to avoid conflicting agendas. Working with cross functional teams can help ensure that technical requirements and performance expectations are identified. This is critical to avoid missteps where the organization fails to establish internal alignment.

Some groups may not understand all the requirements. In some cases, implementation of one initiative may need to wait until other projects are complete. Executive sponsors can help ensure everyone works together. Establishing a consensus will ensure the organization gets what it needs. It will ensure that technology purchases integrate with network infrastructure and backend systems.

3. Establish metrics to measure performance gains from TEM, WEM and MMS programs. Executives can help identify what areas should be measured and rules for tracking gains. With cost savings projects try to establish an ROI upfront. For projects that seek higher operating margins measure revenue per employee or revenue growth. Different departments: finance, technology, sourcing and human relations can report specific contributions from deployments of new telecom technology.

4. Promote the results that TEM, WEM and MMS programs are producing. Telecom managers should work with marketing and human resources to develop the most effective ways to promote how the organization is benefiting from telecommunications innovation.

Conclusion

Organizations that use TEM, WEM and MMS programs most strategically are those that have C-Level involvement. It is important to obtain an executive sponsor at the outset. This is one of the most important factors in successful deployments. Executives are usually better positioned to secure resources and funding for these programs. Executive sponsorship will help drive more rapid adoption of TEM, WEM and MMS offerings, which will help secure better returns and competitive advantage for the enterprise.

One consideration is the distinction between an ROI calculation which quantifies both the costs and the expected benefits of a specific project over a specific timeframe, compared to Total Cost of Ownership which just focuses on costs.

- **ROI** = (Gain from Investment – Cost of Investment) / Cost of Investment
- **TCO** = The purchase price of an asset + the additional ongoing operational costs.

IT and telecom investment decisions should focus less on technology and more about the business capabilities the technology enables. Calculation of ROI offers a strong way to represent this. Getting business units to fund TEM and WEM projects makes sense because they reduce ongoing operational expenses in TCO, and free up funds for technology innovation.

This isn't to say that the business justification should focus solely on "hard dollar" savings or refunds from past billing errors to determine ROI. Programs that rely solely on these items are incomplete and often short-lived. If there is no accurate record of the costs before the program was implemented, it will be hard to prove the program has reduced expenses. This approach will also fail to consider additional benefits from the programs that are more difficult to quantify. Many of the tasks associated with TEM, WEM and MMS may have been neglected before the programs were implemented. There may also be new efficiencies from TEM WEM and MMS programs with gains in employee productivity from a help desk that keeps employees online when they are out of the office.

Solution providers and enterprises may use different names for the four main categories, but the business case for TEM, WEM and MMS programs falls into these areas:

- Telecom Savings
- Labor Efficiencies
- Indirect Savings
- Security Compliance.

As TEM and WEM evolve, these programs no longer focus exclusively on telecom expenses. Many programs are addressing technology expenses and management of security. This is a natural extension of convergence, mobility and MMS offerings.

With MDM, MAM, EMM and MMS programs, the capabilities are often considered as table stakes or minimum requirements for securing data and providing employees with mobile tools that they need for work. Increasingly this view is starting spread to TEM and WEM. With management of technology and security considerations, the traditional focus on expenses and cost savings is too limiting. The business case and cost justification must also evolve, or perish from obsolescence.

About TEMIA

In 2006, many of the largest Telecom Expense Management (TEM) solution providers established The Telecom Expense Management Industry Association (TEMIA) to raise awareness and knowledge of TEM solutions. TEMIA's ongoing mission is to improve the ROI of TEM solutions and service quality through the development and promotion of clear and understandable industry standards, reasonable performance metrics and to cultivate shared industry knowledge among TEM providers, business partners, telecom service providers, and enterprise clients. TEMIA solution providers help their clients manage over \$61 billion in telecom and data assets annually. Further, TEMIA members subscribe to a Code of Ethics, which clearly differentiates their level of commitment to their clients. For more information about TEMIA, please visit, <http://www.temia.org>, contact info@temia.org, or call TEMIA's Executive Director, Joe Basili at 973 763-6265.



About Network Control

For 17 years Network Control has been a recognized leader in managed services that enable businesses to reduce and better control their voice, data, conferencing and wireless costs while improving the overall communications infrastructure. Companies have seen a six-month payback and typical ROI of 250-400% under the Network Control business model. The company has also pioneered Technology Expense Management, a next generation services model that reflects the increased complexities of communications and its merger into the broader corporate IT infrastructure.

Network Control's customers range a variety of industries and sizes from mid-size to large enterprises. More information can be found at www.network-control.com



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