



Report

*Industry Research
from AOTMP*

Benchmarking the Value of TEM Programs Over Time

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“There is no question that cost and ROI continues to be one of the strongest drivers for TEM programs in 2008”

Executive Summary

Almost one third of enterprises indicate that one of their top challenges in establishing a telecom expense management (TEM) program is creating a business justification for TEM. This report examines benchmark data that compares the cost reductions from various savings categories of TEM programs over time. Data was collected from a wide variety of enterprises in various stages of TEM program development. The enterprises were then categorized according to those who had:

- No formal TEM program
- Established a formal program within the past year
- A formal program within the past year
- A formal program established for 1 year
- A formal program established for 2 years
- A formal program established for 3 years
- A formal program established for 4 years or more

The TEM program duration was fixed for this portion of the analysis. Random variables such as industry, total monthly spend, etc., were also taken into consideration. The general linear models (GLM) procedure was chosen to analyze the data in order to determine whether the between-group differences in the means of several TEM program outcomes (e.g. average savings from contract negotiation) were either equal or statistically significant (highly unlikely to be caused by chance).

In many cases, association between the various TEM age categories and the TEM outcome measures were found to be significant. Some key findings include:

- There is a significant relationship between the age of a TEM program and contract negotiation savings rates (CNSR). For example, TEM programs that are one year old or younger have a CNSR that is, on average, nearly three times greater than enterprises that have no program
- Optimization savings are nearly five times greater for enterprises that have had their TEM program for two years compared to those with no program
- Audit savings are 70% greater for enterprises that have an established TEM program for two years compared to those with no program
- Expense allocation chargebacks have the greatest impact on curbing expenses for programs that have been established for two years; savings drop in the third year, but return in the fourth year



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Creating an ROI Model for TEM Programs

TEM programs do not generate new revenue through sales of products and services, but effective programs produce refunds and savings that can be used in developing a return on investment (ROI) model. If an investment does not have a positive ROI, or there are alternatives with a higher ROI, then the investment should not be undertaken. The likelihood of achieving the ROI should also be factored into a business justification for a TEM program. Another consideration is the ROI period or the amount of time between the initial investment and the time monthly operating savings pay for the investment. Below is a typical ROI calculation.

$$\text{ROI} = \frac{\text{Gain from Investment} - \text{Cost of Investment}}{\text{Cost of Investment}}$$

An ROI analysis for TEM programs should also be weighted for the cost of no action or delayed action. Analysis based entirely on savings is blind to special considerations in a telecom environment. For example, if there is no TEM program or effort to identify billing errors, the statute of limitations or provisions in a contract may prevent an enterprise from securing refunds for billing errors. Personnel that have special knowledge of contracts and billing issues may leave the enterprise or service provider, and these departures can impact the ability of the enterprise to resolve claims. It could become difficult to build the business case that is necessary resolve billing disputes because contracts may contain language that is difficult to understand. Special considerations like these should be considered in an ROI analysis.

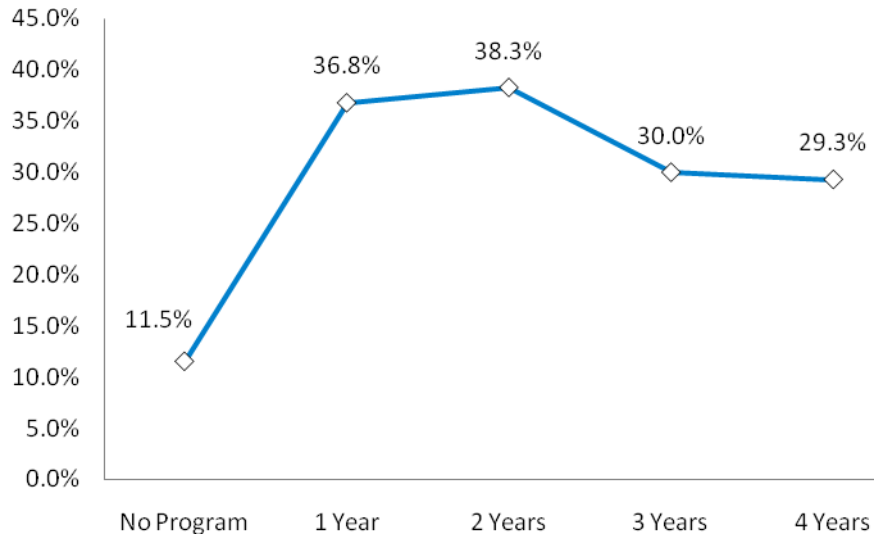
Deregulation and competition in the U.S. market have led declining service rates for telecommunications over the past two decades, yet many enterprises find that their spending has increased. In most cases, lower rates have been offset by increases in consumption of services. Growing consumption of wireless services, transmission of data, and substitution of voice and video conferencing for travel are driving this growth. TEM programs can help enterprises cope by providing controls and proactive measures to reduce expenses. Because of deregulation and declining rates, enterprises that have no formal TEM program report some savings. Savings for those that have a program reach a peak in the second year, but the benefits of programs continue to outpace organizations with no program.



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Figure 1: TEM Program Savings Over Time



Source: AOTMP, October 2008

This report will provide a guide to understand how cost savings from TEM programs change over time. Managers that have been given a directive to cut their budgets will find the information in this report helpful in providing information to secure a budget for a TEM program. It will also provide a defense for programs that are in danger of being cut. Finally, these findings provide important benchmarks for organizations to see how they compare to their peers.



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Table of Contents

- Executive Summary ii
- Chapter One 1
 - Developing a Business Case for TEM Programs 1
- Chapter Two 6
 - Thinking Constructively About TEM ROI 6
- Chapter Three 9
 - Benchmarking the Value of TEM Programs over Time 9
- Appendix A: Research Methodology 12
- Appendix B: AOTMP Research, Publications & Certifications 13
 - Related AOTMP Research & Publications 13
 - AOTMP Certification Boot Camps 13
 - About AOTMP 14

Figures

- Figure 1: TEM Program Savings Over Time iv
- Figure 2: Audit Refunds Over Time 1
- Figure 3: Optimization Savings Over Time 2
- Figure 4: Late Payment Penalties over Time 3
- Figure 5: Allocation Chargeback Reporting 4
- Figure 6: Contract Negotiation Savings 4
- Figure 7: Most Valuable Metrics for Measuring TEM Programs 5
- Figure 8: How TEM Programs Are Viewed By Executives 6
- Figure 9: Top Changes of Managing Telecom Expenses 9

Tables

- Table 1: The Financial ROI Model for TEM 7



Chapter One

Developing a Business Case for TEM Programs

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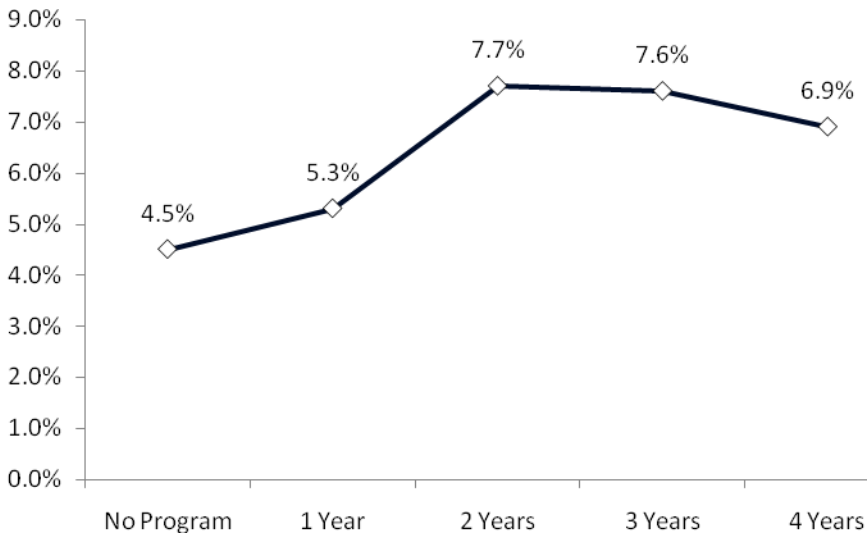
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Expense Validation and Contract Compliance (Audit)

Telecom billing is a highly complex process, complete with time-sensitive expenses (peak and off peak), fixed and metered charges, and volume-sensitive discounts. New technology, changing services, and government regulations create a moving target for telecom service providers. In a market in which rates are declining, billing errors are more likely to favor telecom service providers. Therefore, validation of billing and contract compliance activities are more likely to generate savings for enterprises. Errors include mistakes in the application of rates, tariffs, and contracts to billing. In addition, audits will find errors through the reconciliation of inventory and changes from move, add, change, and disconnect (MACD) activity with billing. Line verification calling can identify services that should not be associated with the enterprise. Physical inventory validation can go one step further by finding circuits that are not functioning properly, such as circuits with no cross-connect and services that are demarcated incorrectly. Validation of taxes completes the package of savings for audit recovery activities.

The benchmark data below is derived from the billing errors that enterprises identify multiplied by the success rate for claims that are filed with telecom service providers. This approach avoids over-reporting of audit results that arises when surveys simply ask about billing errors without considering the success rate for securing refunds on billing issues. Enterprises reported the greatest savings in the second year of the program. Savings decline over time, but the savings in the fourth year are nearly 55% higher compared enterprises that have no TEM program.

Figure 2: Audit Refunds Over Time



Source: AOTMP, October 2008



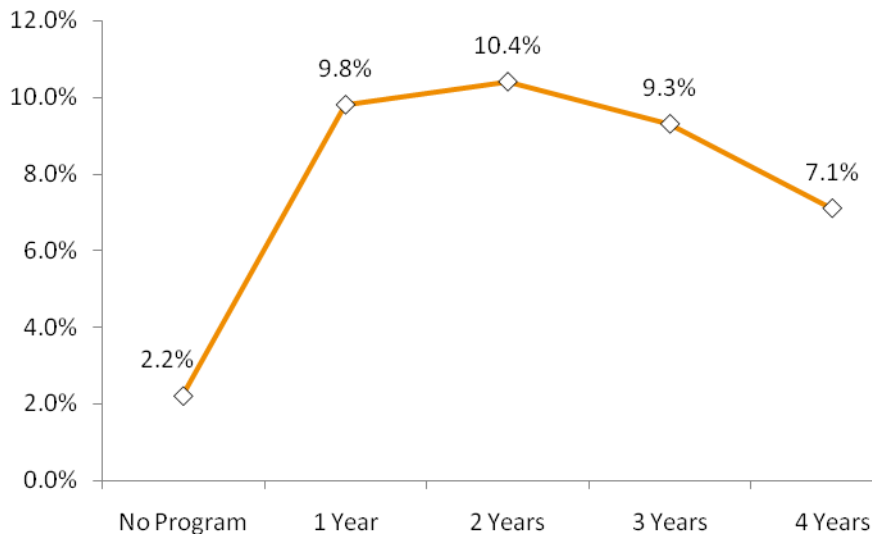
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Optimization Savings

An effective program will use business intelligence from a TEM program to identify cost-saving optimization opportunities. Savings opportunities can include analysis of toll free calling to optimize RESPORG carriers for intralata, intrastate, and interstate calling; consolidation of circuits to higher capacity services with an overall lower cost; and optimization of wireless service plans. Pooling of wireless plans should align purchases of peak minutes to consumption so that unused peak minutes are not forfeited at the end of the month. An optimized corporate pool of wireless users will ensure a lower net effective cost per minute. This is calculated from the cost of a pool or bucket divided by the actual minutes used.

Figure 3: Optimization Savings Over Time



Source: AOTMP, October 2008

Late Payment Penalties

The ability to pay invoices on time has a significant impact on the ultimate cost of telecom services. Over 49% of survey respondents indicate that they incur late payment penalties that average 1.2% of their overall spending for telecom services. These penalties may seem relatively small, but the effective cost is higher when one considers the impact of the current business cycle and capital requirements for most businesses.



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Enterprises should work to ensure they have automated reporting to identify when bills are received, when they are batched for review, when they are approved, when they are paid, and when the payment was received by the telecom service provider. This will enable the enterprise to identify bottlenecks in the process. TEM suppliers can help in the process, but they also need to be accountable for ensuring late payment penalties are avoided.

The graph shows small variations in enterprises' records with late payment penalties to reveal how the charges actually rise in the first year of a TEM program. This could be the result of miscues as bills are transferred to a TEM supplier or it could reflect the fact that enterprises gain better visibility into late payment penalties through TEM programs. In the third year, another increase occurs in late payment penalties. The survey shows that it takes four years for TEM programs to reduce their late penalties to a level below those that do not have a TEM program.

Figure 4: Late Payment Penalties over Time



Source: AOTMP, October 2008

Expense Allocation Chargebacks

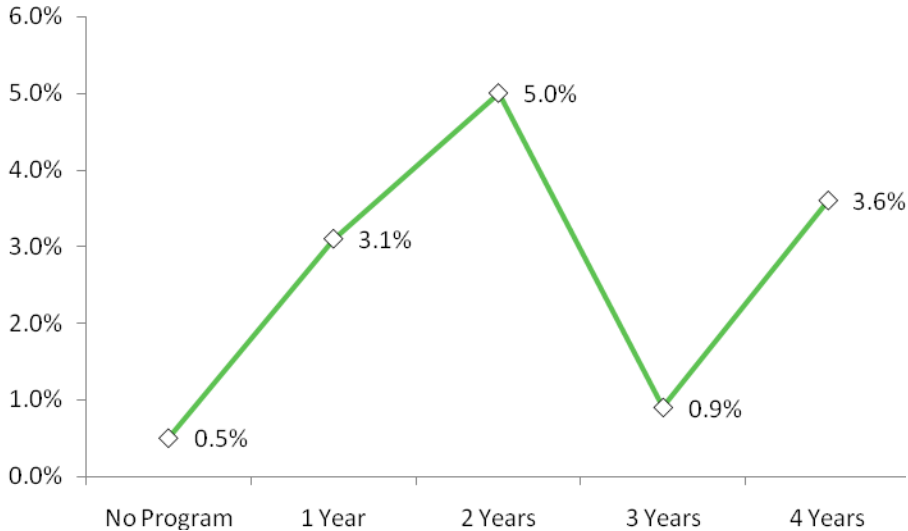
Many TEM programs expend considerable effort to generate allocation chargebacks. Earlier research conducted by AOTMP, in *CFO and CIO Perspectives: A Top-Down View of IT and Telecom Management*, identified a trend in which allocation chargebacks promoted better accountability and reduction in wasteful consumption of services. The latest survey data shows that better visibility of expenses reduces consumption of services by 5% in the second year of a TEM program. The savings may drop in the third year, but it should be noted that these savings are cumulative. The savings then rebound in the fourth year of the program.



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Figure 5: Allocation Chargeback Reporting

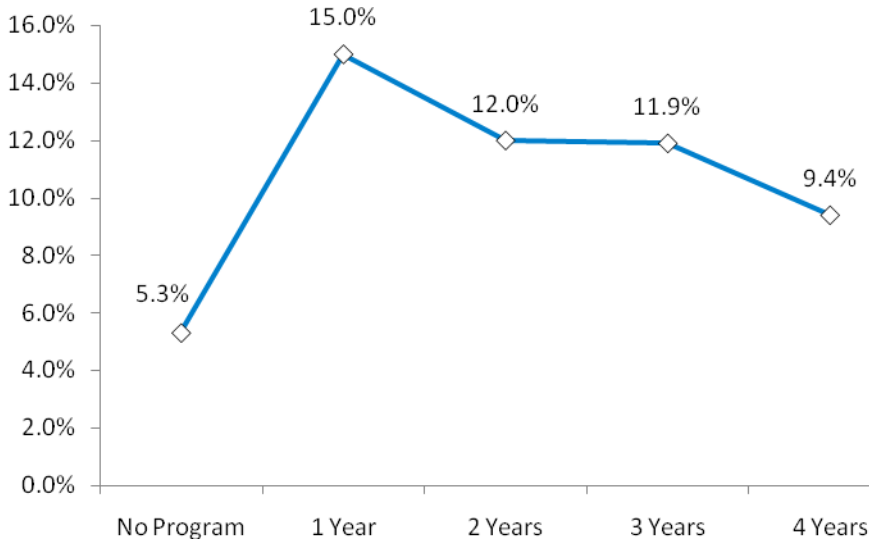


Source: AOTMP, October 2008

Contract Negotiation

In a market where new technology and innovation is driving reductions in rates for telecom services, contract negotiation can be a rich source of savings. Even programs that have no dedicated TEM program report that they are able to produce savings from contract negotiation. However, organizations that have TEM programs are able to drive three times more savings in the first year and continue to drive savings in the future.

Figure 6: Contract Negotiation Savings



Source: AOTMP, October 2008



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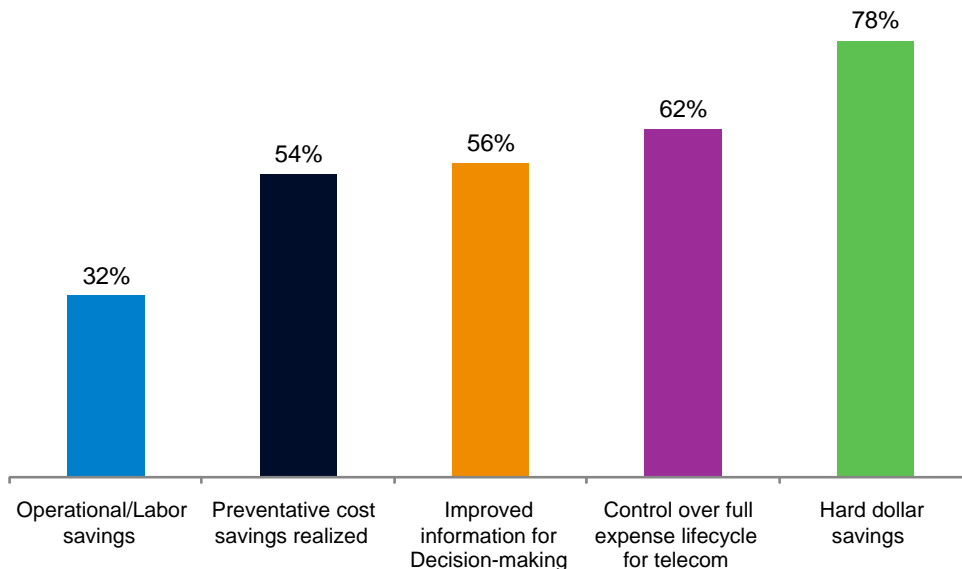
Operational Savings (FTE)

TEM programs can also contribute to operational savings. FTE reductions associated with MACD activity, invoice processing, bill payment, and efficiency gains in providing reports on telecom expenses should be included in the business case. There are also benefits and time savings from unifying multi-departmental processes and reducing redundant systems. If it is possible to reduce staffing expense or transfer people to other departments, the savings will have a real impact on the budget. The labor savings in this benchmark varied greatly by enterprise. Enterprises experienced labor savings of between 0.2 and 20 FTEs for those indicating FTE reductions as a result of a TEM program. Enterprises may find the savings are larger if they choose a business process outsource delivery model.

Other Considerations

TEM programs also deliver better information about telecom expenses. This information can be leveraged for more effective sourcing, audit wins, and improved decision-making. While 56% of enterprises indicate that better information from TEM is a valuable metric for measuring the value of TEM programs, it is nearly impossible to assign a value to better information. Ultimately, better information is an enabler for other areas that drive savings, but it has little to no value that can be assigned to the cost justification model.

Figure 7: Most Valuable Metrics for Measuring TEM Programs



(Respondents selected three choices for this question) Source: AOTMP, October 2008



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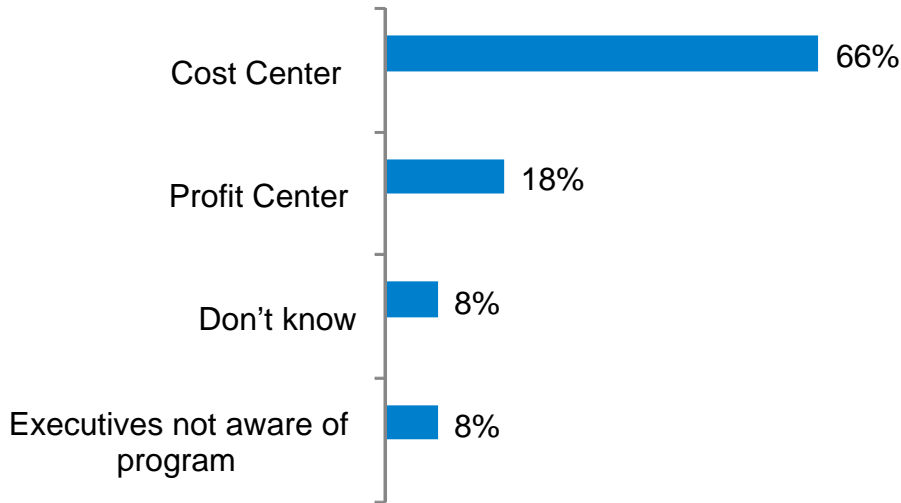
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Chapter Two

Thinking Constructively About TEM ROI

TEM produces a more tangible ROI than many other technology projects, yet 66% of executives view TEM programs as cost centers. In an enterprise, most functions are categorized as either a profit center, because they contribute to profit for the organization; or a cost center, because they do not generate revenue and profit. A cost center may perform necessary tasks or functions, but it is viewed as generating expenses. Cost centers are the first places enterprises will make cuts. Therefore, how a TEM program is perceived by executives is critical because enterprises are seeking to cut expenses.

Figure 8: How TEM Programs Are Viewed By Executives



Source: AOTMP, October 2008

A case can be made that TEM should actually be considered a profit center because effective TEM programs produce savings or returns that exceed the investment. Services and billing continually change, so it is not possible to capture all of the refunds and savings without an ongoing, dedicated program.

Calculating the Results: Hard Dollars vs. Soft Dollars

Many enterprises have clear distinctions between hard dollar and soft dollar savings. Hard dollar savings typically focus on activities that directly impact the budget. Soft dollar savings are less tangible because they deal with cost avoidance. TEM program managers need to align their ROI savings reporting with their corporate accounting and finance rules.



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There are also different approaches to calculating savings:

- A rolling 3-month term
- A rolling 12-month term
- The contract term
- The calendar year
- The budget year

A budget year or calendar year approach may have unintended consequences by creating incentives to time when preventive savings are identified. If a calendar year is used, and the error is identified in December, its savings will only count for one month. If it is identified in January, it will be counted for 12 months. Enterprises need to develop policies with a practical and fair approach to calculating preventative savings.

The financial ROI model for TEM illustrated in Table 1 is based on savings benchmark data from the research findings. Savings have been applied to an enterprise that spends \$30,000,000 annually with telecom service providers for voice, data, and wireless services. The model also uses \$420,000 in estimated annual labor costs to manage telecom expenses and an estimated cost of \$720,000 for TEM technology and/or business process outsourcing. These variables should be adjusted to account for enterprise-specific circumstances.

Table 1: The Financial ROI Model for TEM

Category	Expected Savings ⁽¹⁾	Monthly Savings on Telecom Expenses	Annualized Savings
Expense Validation & Contract Compliance	2.4%	\$59,375	\$712,500
Optimization Savings	7.0%	\$173,750	\$2,085,000
Elimination of Late Payment Penalties	0.2%	\$5,000	\$60,000
Improved Accountability (through usage charge-backs)	2.7%	\$66,250	\$795,000
Sourcing: Better Rate Plans & Contract Negotiations ⁽²⁾	6.8%	\$56,458	\$677,500
Labor & Indirect Costs	⁽³⁾		
Program Savings		\$360,833	\$4,330,000
Cost of TEM	\$720,000 + \$420,000 = \$1,140,000		
Total ROI (Year One)	$(\\$4,330,000 - \\$1,140,000) / \\$1,140,000 = 280\%$		

Source: AOTMP, October 2008

- (1) This model utilizes averages for programs over a four year period.
- (2) Not all contracts will be re-negotiated each year. Therefore, the sourcing savings will only impact a portion of the overall \$30,000,000 expenses. Calculations are based on 1/3 of the overall \$30,000,000.
- (3) The labor savings are not included in this ROI calculation, as the number of variables associated with FTE reduction are highly dependent on TEM program structure.



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Multi-year ROI calculations should reflect the impact of savings from lower annual telecom expenses for future years of the program. However, annual expenses also must be multiplied to reflect increases in consumption of telecom services. For example, in recent years, there have been substantial increases in the consumption of wireless, data, and conferencing services. Without considering this increase, the savings attributed each year from the TEM program would create an unrealistically low level of annual spending for telecom services. Models that rely solely on audit results, which are often considered “hard dollar” savings, may require additional cost saving categories to bolster the business case and ensure that the program is sustainable over multiple years.

In the early stages of a TEM program, historical audits may produce large savings from errors that have compounded. Once implemented, an effective program will find the errors in the first month that it occurs. There will be no compounding of errors, but enterprises with long standing TEM programs indicate TEM programs continue to secure refunds. Telecom inventories, contracts, and billing continue to change. Without a proactive program, the savings would not be captured.

It should also be noted that savings categories are interrelated. It is not possible to simply add up all the cost savings categories without some recognition that each area will impact another savings category. For example, sourcing activity will reduce annual telecom spending and overall costs. After the new contract is implemented, there may be a period of increased billing errors.



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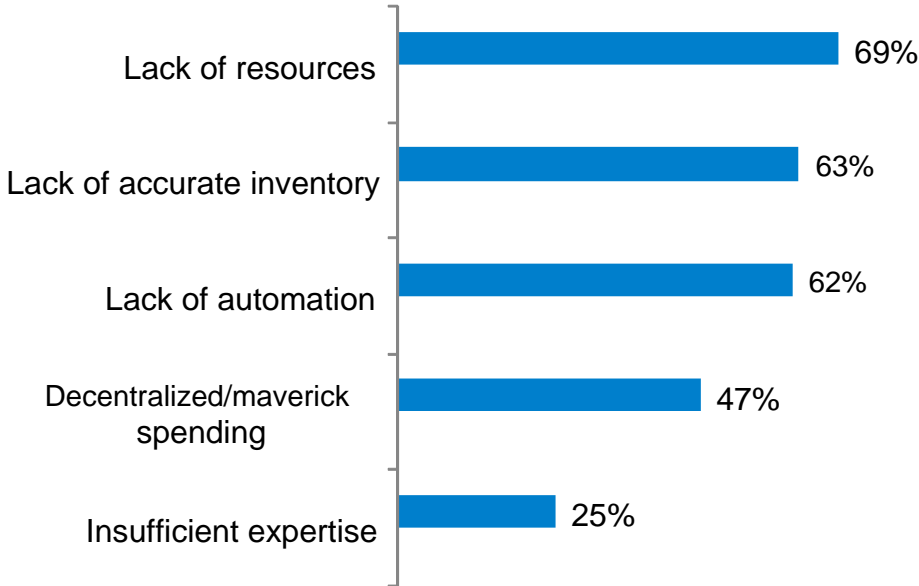
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Chapter Three

Benchmarking the Value of TEM Programs over Time

The average Fortune 500 Company reports that telecommunications and related network services are a top line-item expense. Survey respondents had an average of \$30 million in annual telecom expenses. Some of the challenges in managing telecom expenses include lack of resources, problems with inventory accuracy, limited automation, decentralized or maverick spending, and insufficient expertise.

Figure 9: Top Changes of Managing Telecom Expenses



Source: AOTMP, October 2008

Decentralized spending, continually changing inventory, complex billing, and contracts that continually change make telecom a rich target for cutting expenses without impacting services. However, telecom expense management is an area that does not get much respect from executives. It is viewed as a cost center by two-thirds of the survey respondents. Changing these perceptions so executives understand the value of TEM is critical, but it requires a shift in thinking.

Executives often do not understand why telecom is different from other categories. When TEM is viewed as a discipline that is focused on processing invoices and finding billing errors, the perception is that accounts payable can manage these activities. Effective TEM programs go much further. They can provide added value from collecting information on how telecom services are consumed. Business intelligence on telecom spending can be used to do a more effective job negotiating contracts. A TEM program can also identify inefficiencies and corrective actions for consumption of telecom.



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Telecom expense management involves areas that are often handled by internal groups that need to coordinate their activities and strategies. Management of the full lifecycle for telecom expenses requires TEM program managers to work closely with procurement, service ordering, telecom, finance, and accounts payable departments. Each department needs to understand how it impacts the other groups. For example, if procurement fails to provide the latest contracts to the team that places orders with carriers, the services may not be placed with a preferred provider. The new order will not receive preferential pricing. The team that placed the order may fail to notify the group that is responsible for validating billing and this can lead to delays in processing the bill, creating late payment penalties. Accounts payable may incur additional delays because there is no information on how to allocate the chargebacks.

A good TEM program can provide automation to promote communications among different departments. It can also provide the business intelligence to make better informed decisions that will drive additional savings or new productivity through improved communications with customers, supply chain partners, and internal relations. An outsourced TEM program can supply the resources and domain expertise to further improve program management.

Telecom Expense Management (TEM) is the practice of managing the full lifecycle of a telecom expense to optimize control over expenses, enterprise spending on telecom, and the operational costs associated with managing those expenses. TEM is a component within a comprehensive telecom environment management practice. TEM Suppliers offer a range of capabilities, which may include sourcing, procurement, invoice reconciliation and payment, asset management, and reporting/analysis to enable business processes and support telecom environment management objectives.

Central to AOTMP's TEM Supplier Selection Standards and Best Practices is methodology that promotes informed decision-making and success monitoring that will create desired and intended results. The standards and best practices outline five phases of TEM supplier selection:

1. Needs Assessment
2. Business Process Evaluation
3. Business Case Development
4. TEM Supplier Sourcing
5. Ratify the Business Case

This report has provided a framework to benchmark the third step of business case development. Business case development starts with documenting the current internal program costs. Next, organizations need to create a financial cost justification model. While the findings of this report show the greatest savings are secured in the second year of a program, the savings are cumulative and they continue to show strong returns in future years as well. TEM programs provide significant cost savings that make them particularly attractive in the current economic environment. Enterprises must make an initial investment to reap the savings that can go to improve bottom-line profitability of the company.



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Research Analyst Profile

Joe Basili

Vice President Research, AOTMP

Joe Basili is Vice President of Research for AOTMP and a recognized thought leader with more than ten years of experience in telecom networks and IT asset management. Joe has conducted research, written extensively and keynoted conferences on a range of topics that include telecom expense management, wireless cost management, network performance, unified communications, and Electronic Invoice Presentment and Payment (EIPP).

Experience

Drawing on a career that includes work in marketing, sales, operations, and management, Joe offers market insights, trend analysis, and customer research. His recent experience includes Business Process Outsourcing (BPO), professional service consulting, SaaS hosted and licensed software, invoice management, billing and e-media, SAS 70 Type II processes, Sarbanes-Oxley compliance, and payment automation.

Education

Joe holds a B.A. with a double major in Economics and Political Science from Vanderbilt University. He continues his education with an active interest in technology's application to business problems.



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Appendix A: Research Methodology

In August and September 2008, AOTMP conducted a survey and examined the challenges enterprises face in selecting a TEM Supplier. The online survey used for this report included 198 respondents, who came from a variety of industries, that included questions designed to determine the following:

- How enterprises manage TEM
- Top enterprise priorities as it relates to TEM
- Top challenges in effectively managing telecom expenses
- Cost savings from various categories of TEM programs
- How time impacts program results
- Benchmarks for enterprises that have: no formal TEM program, and those with a range of different program durations.

AOTMP supplemented this online survey with e-mail and telephone interviews with select survey respondents, gathering additional information on telecom expense management strategies, experiences, and results.

Responding enterprises included the following:

Job title/function: The research sample included respondents with the following job titles: senior management, such as CEO, VP or Director (28%); Manager (48%); staff (24%).

Industry: The research sample included respondents from the following industries: Retail (15%), followed by Manufacturing (13%), Healthcare (13%), Technology companies (9%) and over 25 other categories. Other sectors responding included construction/architecture/ engineering, distribution, education, consumer electronics, food/beverage, mining/oil/gas, paper/lumber/timber, public sector, retail, telecommunication equipment, transportation/logistics, travel/hospitality/restaurant, utilities, and wholesale.

Geography: Most study respondents were from North America (90%), with 7% from Europe, 3% from Asia/Pacific.

Company size: 29% of respondents were large enterprises with annual revenues exceeding \$5 billion; 25% were from organizations with \$5 billion to \$1 billion; 15% were midsize enterprises (\$1 billion and \$500 million); and 31% were from small businesses (annual revenues of \$500 million or less).

TEM Supplier sponsors had no substantive influence on the direction of the Benchmarking the Value of TEM Programs Over Time Report. Their sponsorship has made it possible for AOTMP to make these findings available to readers at no charge.



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Appendix B: AOTMP Research, Publications & Certifications

Related AOTMP Research & Publications

- [2008 Telecom Expense Management \(TEM\) Market Landscape](#) (September 2008)
- [TEM 2008 Conference Brief: A New Agenda for Telecom Environment Management](#) (May 2008)
- [Wireless Mobility Management: Over 10,000 Decisions to Manage](#) (April 2008)

Information on these and other AOTMP publications and programs can be found at www.aotmp.com.

AOTMP Certification Boot Camps

AOTMP offers rigorous certification programs that include intensive training and education in key areas within telecom environments. Certifications are obtained by successful completion of intensive Certification Boot Camps and testing. Certification levels include:

- Certified Telecom Management Specialist (CTMS)
- Certified Telecom Management Executive (CTME)
- Certified Telecom Management Administrator (CTMA)
- Certified Wireless Management Specialist (CWMS)
- Certified Inventory Management Specialist (CIMS)
- Certified Telecom Audit Specialist (CTAS)
- Certified Vendor Sourcing Specialist (CVSS)
- Certified TEM Program Specialist (CTPS)
- Certified Performance Management Executive (CPME)

Matching your organization's telecom needs with the right skill set can help you make smarter, more cost-effective hiring decisions. AOTMP Skills Assessments offer a means to evaluate skills and make more confident staffing choices. Skills Assessments also aid in evaluating employee growth, personal strength, and career path progression. Organizations find value in AOTMP's Skills Assessment offering for:

- Candidate selection
- Pre-employment testing
- Performance measurement
- Management selection

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