

**Your Exceptional TEM Program:
Best Practices for Invoice Management Using TEM
Metrics to Improve Performance**



Executive Summary

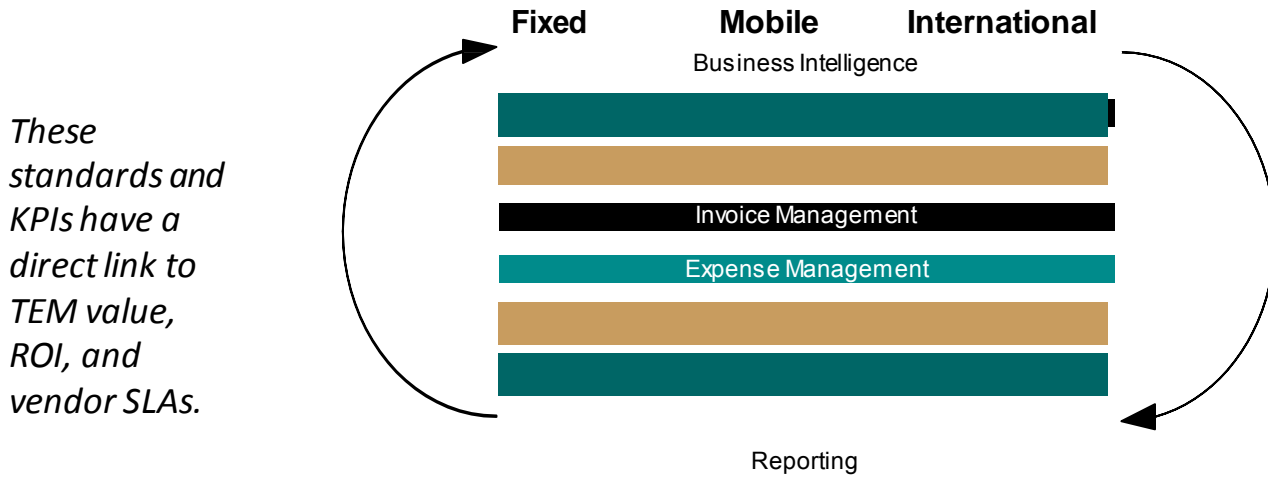
Many enterprises struggle with processing telecom invoices. Organizations must often process bills from carriers in a paper format because knowledge and resources are not available to develop automated readers for varied carrier billing. This can lead to inefficient labor-intensive processes, challenges in validating expenses, difficulties in getting accurate reports for network communications expenses, and problems in harnessing information about network services for optimization and transformational projects.

This report focuses on invoice management. It provides explanations for performance measures and specific calculations to benchmark performance. Readers will learn about the business goals that are addressed by invoice management, things that can be learned from Key Performance Indicators (KPI) performance standards, and corrective actions to address results from the calculations.

As highlighted in a previous report on inventory management, there are two different approaches to implementing Telecom Expense Management (TEM) programs. One approach begins with processing the invoices. The other starts with building an inventory before processing invoices. ETMA is not advocating one approach over the other, but we do recommend that enterprises avoid paralysis of waiting to build a comprehensive inventory before selecting a TEM supplier.

In the time that it takes to build a comprehensive inventory, it is likely that there will be Move, Add, Change, and Disconnect (MACD) activity. TEM programs can help maintain these changes while the inventory is built. This will help to ensure that the final inventory is current. Also, if the enterprise delays selection of the TEM program or it waits for an inventory to be built, it will forfeit savings that could have been achieved while the inventory was being built. Effective programs manage the full lifecycle of a telecom expense focusing on eight major service domains in the diagram below.

Figure 1: TEM Components



Enterprises do not have to take on the challenge of managing all the areas of TEM on their own. There are pros and cons to consider in having a single TEM supplier that can perform all of these functions or using specialists for particular areas.

Regardless of which approach an enterprise selects, an effective TEM program transitions decentralized processes into a unified approach. TEM programs foster better communication among different groups and unification of telecom expense management functions to drive better results. Effective TEM programs manage the full lifecycle of a telecom expense outline in the diagram above.

TEM engagements vary considerably from one client to the next, and suppliers are not all the same. However, the measures to monitor performance must be quantifiable, universal, and consistent. The standards and Key Performance Indicators (KPIs) must meet the criteria of openness. These metrics align with business value and tie directly to program ROI. In addition, the performance measures should apply equally to enterprises and TEM Suppliers. They should also be equally applicable for software, hosted, and managed service or business process outsource (BPO) engagements. Finally, the standards should apply equally well for programs that are managed at domestic sites and international locations.

ETMA's goal in publishing this information is to help educate the market by providing information for enterprises and suppliers to raise the performance of their TEM programs. These standards and KPIs will be useful for senior level managers and operations personnel at enterprises and suppliers.

Invoice Management

Domain	Performance Metric	Calculation
Invoice Management	<ul style="list-style-type: none"> • Invoice Coverage • Invoice Recognition % • Invoice Reconciliation % 	<ul style="list-style-type: none"> = # of Invoice Elements = \$ value recognized / \$ total value = \$ value reconciled / \$ total value

Automation of invoice processing drives savings by eliminating manual labor-intensive receipt and capture of billing information. Automation can provide a structured workflow for approving expenses and tracking of missing bills to avoid late payment penalties and uncontrolled service disconnects for nonpayment of bills. Invoice Management performance metrics provide an objective quantifiable measure of the completeness and granularity of the invoices under management.

- **Invoice elements** are the line items on bills for fixed or mobile telephone lines, circuits, or other services provided by telecom service provider.
- **Invoice coverage** is the number of invoice elements under management and expressed as a percentage of all services billed.
- **Invoice Recognition** is the percentage of invoice amounts from invoice elements that we can analyze in sufficient detail to determine their reconciliation with the binding inventory and contract elements; the service is recognized and we know the meaning of the charge or credit actually found on the bills. A high percentage enables a high rate of analysis. Low invoice recognition rates signify that the analysis and effective level of invoice management is low.
- **Invoice Reconciliation** is the percentage of invoiced amounts recognized and mapped to active contracts, a service guide, tariff rates or pricing schedule in sufficient details to determine their expected costs. A low rate of invoice reconciliation results in a high rate of billing errors that will remain undiscovered. Invoice reconciliation can also measure the level of invoice processing automation and cost reduction from automation of manual invoice processing.

Calculating the Number of Invoice Elements

A database should be created from all of the invoices, which will store each line item for fixed or mobile telephone lines, circuits, and services. Sometimes TEM programs face implementation challenges centralizing invoice management functions. It can be difficult to identifying who is receiving telecom bills and getting carriers to redirect bills to the right contact for processing. It may seem like the accounts payable department would be a good resource for this project since they usually pay all of the bills, but bills for network services may be difficult to identify or separate from bills for other services. After gathering all of the billing, organizations must verify that billing is being processed accurately with a high degree of granularity. If bills are managed at a summary level that simply reflects the total amount on the bill, it will be impossible to reconcile billing components with specific tariffs, service guides, or special contracts.

Calculating the Invoice Recognition Percentage

There are often technical challenges for enterprises that attempt to create readers to accurately process billing from the wide ranging billing formats from network service providers which can include paper, EDI, CD-ROM, e-mail, HTML, Magnetic Tape, FTP, and website downloads. Slight variations in data formats among different carriers for lines, circuits, or services must be reconciled to avoid problems with invoice recognition.

High invoice recognition rates will increase the validation results reconciling the invoices with special pricing in contracts and tariffs, and inventory. High invoice recognition rates drive high rates of invoice reconciliation and larger savings from identification of billing errors. The invoice recognition percentage is calculated by dividing the dollar value of all recognized elements by the dollar value of all covered invoice elements.

$$\text{Invoice Recognition Percentage} = \frac{\text{\$ Value of Recognized Elements}}{\text{Total \$ Value}}$$

Calculating the Invoice Reconciliation Percentage

To calculate the invoice reconciliation percentage, the dollar value of the reconciled invoice elements is divided by the dollar value of all covered invoice elements. Each charge or credit on each bill should map to a price, and it should be reconciled to the inventory for a specific fixed or mobile telephone line, circuit, or service provided by a telecom service provider. Different lines, circuits, and services can receive pricing from multiple contracts. In addition, contracts often contain many different price-points and discounts.

$$\frac{\text{\$ Value of Reconciled Elements}}{\text{Total \$ Value}}$$

Using Invoice metrics as a Diagnostic Tool

Invoice recognition and reconciliation provide insights into the granularity and dollar value of invoices under management. Sometimes prioritizing the largest bills can help improve scores. Some common challenges include

- Inability to process/parse/bundle varied carrier billing data elements from paper, EDI, CD ROM, E-mail, HTML, Magnetic Tape, FTP, and website downloads
- Inability to process/parse/bundle carrier billing data elements from international billing due to language, currency, legal problems, or other barriers
- Inability to capture complete account hierarchies from each carrier
- Inability to capture adequate detail for each billed element
- Inability to align billing detail with contracts and/or inventory
- Inability to align account-level charges w/ non-line specific rates/terms
- Inability to apply rates/terms across a range of accounts

TEM suppliers can help provide their expertise in overcoming many of these obstacles.

Service Level Agreements (SLAs)

Many organizations struggle with vague SLAs that do not directly contribute to business value or ROI of TEM programs. Threshold values for invoice elements, coverage, recognition, and reconciliation, are specific, quantifiable, universal, and consistent. They have real impact on TEM programs by streamlining data entry and providing granular data that is indispensable to validation of charges.

While the time to process an invoice is also a quantifiable measure that provides business value by eliminating costs from late payment penalties and uncontrolled service disconnects, it fails to meet the test of consistency. After all, there are shortcuts to processing bills at a summary level instead of capturing granular details. Therefore, aligning threshold values for invoice elements, coverage, recognition, and reconciliation makes the metric of the time to process an invoice more valuable.

In general, most SLAs focus on the time to process billing after receipt, since this metric can be controlled. There are also SLAs that promise to process bills and insure a minimum number of days before they are due, and others that promise to completely eliminate late payment penalties. With these approaches, the team that is responsible for adhering to the SLA will flag bills with short pay periods and negotiate extensions to avoid late payment penalties and uncontrolled service disconnects. Some additional considerations would include ensuring that there are always sufficient funds to pay the bills, and SLAs to ensure that the people who must approve expenses perform this function in a timely manner.

Some programs have different standards for the time to process paper compared to electronic bills or invoices from domestic and foreign telecom carriers. Another consideration could be the number of line items, the complexity of the bills, and expense allocations. Establishing SLAs that are specific, quantifiable, universal, and consistent and contribute to business value require close collaboration between the team managing the program and the project managers. Once established, they need to be shared with the project team. Thresholds can be set to establish payment milestones for work and determination of when the program is ready to move from pre-deployment testing to operational status.

Project management and communications can focus on granular information about performance. Managers can understand the cause-and-effect relationships of enterprise activities and carrier processes that impact TEM domains and the ultimate ROI. One benefit of this approach includes opportunities to identify and correct enterprise activities and carrier processes that adversely impact performance. Ongoing project management should provide automated reporting that alert the enterprise and supplier on any issues that impact the SLAs.

Periodically, SLA's should be revisited to ensure that they are still measuring appropriate functions. There may be opportunities to raise standards as the program matures. SLAs may also need to be refined or refreshed based on changes to the environment, company or industry.

Implementing TEM Metrics

TEM metrics should be used for pre-planning, supplier selection, contracting, SLAs, project management, performance management, and communications. These metrics work equally well for programs that are managed through business process outsourcing, internally managed programs, licensed software installed behind a corporate firewall, or hosted software offerings. They can be applied evenly to suppliers' offerings, delivery, methods, process, and tools.

These papers are available for download from the ETMA website (www.etma.org) and ETMA members' websites. Adoption of TEM metrics by enterprises and suppliers will help the entire industry aligning customer expectations, performance, industry standards, and client satisfaction with communications that provide for continual improvements.

About ETMA

In 2006, many of the largest Telecom Expense Management (TEM) solution providers established The Enterprise Technology Management Association (ETMA) to raise awareness and knowledge of TEM solutions. ETMA'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. ETMA solution providers help their clients manage over \$31 billion in telecom and data assets annually. Further, ETMA members subscribe to a Code of Ethics, which clearly differentiates their level of commitment to their clients. For more information about ETMA, please visit, <http://www.etma.org>, contact info@etma.org, or call ETMA's Executive Director, Joe Basili at 973 763-6265.

About Juvo Technologies

Juvo is a Total Telecommunications Management firm that enables clients to achieve significant financial benefits by maximizing telecom efficiencies. Juvo is able to achieve an average of 15%-25% telecom savings for its clients through the precise management of client's everyday telecom needs, including local, long distance, Internet, data, and mobile devices. Juvo's expertise, industry experience, and trademark software, all combine to provide its clients with industry leading telecom solutions to meet ever increasing demands.

Juvo, an active member of ETMA, the Enterprise Technology Management Association, has clients with operations in all 50 states, Canada, Mexico, and the United Kingdom.

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