

Four Stages of Enterprise Telecommunications Management

Accuracy

A Purple Paper on Enterprise Telecommunications Management

Abstract

There are four distinct stages of enterprise telecommunications management (ETM) adoption. Like Maslow's Hierarchy of Needs, each stage addresses a defined set of telecom management needs and desires.

The needs of each stage build upon those of the previous stages. When the needs and wants associated with any particular stage are fulfilled, other more sophisticated and often more strategic needs and desires emerge. The four stages are:

- *Accuracy*
- *Allocation*
- *Analysis and Planning*
- *Acceleration and Enhancement*

Each successive stage reflects the increased sophistication of the organization's relationship with the telecommunications environment, and the increase in the strategic significance of telecommunications to an organization. Hence, network-centric organizations, whose business operations could not exist without the telecommunications infrastructure, are most likely to attain all stages of ETM.

Accuracy Stage

The initial stage of enterprise telecommunications management (ETM) is the “accuracy” stage. This stage is the base of subsequent ETM stages and drives all ETM applications, such as financial management, order processing, asset tracking, etc. It is the fuel that enables inventory-powered ETM.

A cursory definition of the accuracy stage is to have an “accurate” – what, where, how, and who – accounting of the services, equipment, users, and applications that utilize the telecommunications network. This information is used to create and maintain an inventory that drives all the other stages of ETM and all ETM applications. This inventory – an inventory of assets – is itself an asset. Effective use of this asset can dramatically impact the expenses associated with telecommunications networks, accelerate the efficiency of the network-centric organization (NCO), and increase the return on investment.



Source : AT&T

Once an accurate inventory has been created, the challenge is to maintain and improve the accuracy as the telecommunications network environment changes. Having an enforced workflow process that controls the ordering of services, devices, and applications does this. Empirical research by several major corporations, including AT&T, Marriott

International, and Ikon Office Solutions¹, indicates that most financial inaccuracies associated with the operation of a telecommunications network, are largely a manifestation of inventory inaccuracies.

The Accuracy Questions

As NCOs work to attain the accuracy stage of ETM, several very specific questions about the elements that comprise the network will be answered. These include:

What is it?

The first step in achieving the **accuracy** stage of ETM is having clear descriptions of services, equipment, users, and applications. These need to be easily understood, non-ambiguous, and consistent with the business processes of the network-centric organization. The

description includes specific functional, physical, technical, business, and operational characteristics that, when viewed collectively, define the service, device, user, or application.

The description should make the engineering and technical aspects of dealing with telecom suppliers invisible to those using the telecommunications network and those responsible for specific ETM applications, such as expense management and order processing. A clear objective of the accuracy stage is to create definitions (descriptions) that help the network-centric organization make better business choices.

For example, the definition of a particular circuit should include the bandwidth of the circuit, the port associations, carrier information, usage information, physical termination information, etc. By incorporating this information into the ETM solution, better carrier, contract, and equipment selection decisions can be made, and contract/agreement compliance can be more easily managed.

Where is it?

A key characteristic of an accurate accounting of the telecommunications network is being *aware*. What are the services, devices, users, and applications that comprise the telecommunications network, and where are they? Tracking where network elements are located helps the enterprise deploy services and equipment in ways that match the physical and business-process configuration of the network-centric organization.

In the case of mobile communications and mobile access, mobility becomes a component of the definition that is tracked in the inventory. Subsequent management of mobile communications and mobile access can then be performed within the overall ETM solution. Network-powered communications and connectivity, regardless of physical location of the user or application, is a defining characteristic of the NCO and is a foundation block that accelerates business performance. Managing mobile communications and access as a component of the overall ETM solution is crucial to network-centric organizations

Does it belong here?

While awareness places emphasis on knowing what elements are part of the telecommunication environment and where those elements are, another key objective of awareness is also knowing what should *not* be part of the environment.

The near-term benefit of being aware is substantial expense reduction through the elimination of excess and unneeded services and

devices. Longer term, tuning network performance and configuration becomes inventory-powered – driven by specific knowledge of what and who is using the network and where that use is happening.

By knowing the services, equipment, applications, and users that reside within the ETM environment, and by identifying those that should not, the NCO can more accurately manage the expenses associated with its telecommunications network.

Noted below are specific, real-world examples of the role an accurate inventory-powered environment can play in improving financial management and return-on-investment:

- 13,000 employee cell phones reduced to 9,000 in less than 12 months – Cell phones still in use by ex-employees eliminated.
- Over 4,000 calling cards eliminated – Overlap between cell phones and calling cards highlighted by accurate inventory.

What impact will it have?

Applications and devices most strongly determine the network resource impact. For example, a video-editing workstation is likely to require more network resources than a personal computer used primarily to run Microsoft Office, or even the same physical workstation supporting Microsoft Office.

By accurately knowing the characteristics of services, devices, users, and applications, it is possible to make assessments as to the likely impact on the overall telecom network.

For planning purposes, it is important to have descriptions that give some indication as to the network resources that will be required. For actual cost allocation, more exact utilization information is likely to be required.

Who is responsible for it?

The focus of the accuracy stage of ETM is making sure that all the assets and services are accounted for, and properly identified. The second phase of ETM focuses on allocation – who pays for the service or asset? But to set the stage for allocation, it is necessary to have an accurate description so that utilization can be assigned to a specific user, carrier, or application. Before costs can be allocated, responsibility must be attributable.

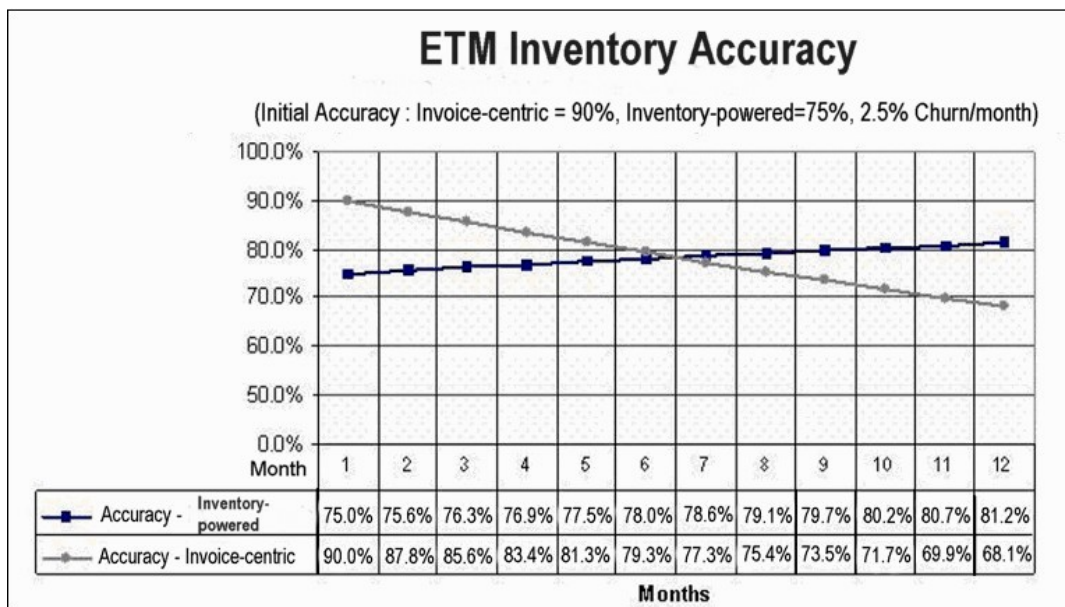
For example, in allocating mobile communications costs, the specific user of a device must be a component of the description.

Staying Accurate

ETM can be dramatically enhanced if powered by a controlled and structured inventory of assets, services, users, and applications. Without an accurate inventory, even invoice auditing for the simplest enterprise will become less effective as the inventory accuracy degrades over time. The challenge is to maintain and improve inventory accuracy as the telecommunications environment changes.

The first step in ensuring continuity of accuracy is the use of a structure workflow process for all inventory related functions, including ordering new services and devices, setting up new users, allocating access to systems and applications, and deleting services and equipment, etc. Inventory-powered solutions that electronically link to suppliers and carriers will be a crucial component of creating the workflow process that ensures an accurate enterprise telecommunications management.

The accompanying graphic depicts anticipated improvement in the accuracy of inventory-powered ETM and the degradation of accuracy for solutions using an ad hoc inventory control mechanism.



Invoice-centric vs. Inventory-powered

¹ From presentations made at "Summit on ETM," May 21, 2004

Rivermine Software, developers and marketers of software-based telecommunications management solutions for network-centric organizations, commissioned this paper. The company offers a spectrum of inventory-powered ETM solutions. Specific solutions include financial management, service order processing, and personal device management.