Revenue Focused Revenue Assurance:

The
GRAPA
Standards

THE GRAPA STANDARDS – OVERVIEW **3**

DEFINITION OF REVENUE ASSURANCE **5**

WHO IS RESPONSIBLE FOR PERFORMING REVENUE ASSURANCE **6**

THE REVENUE ASSURANCE DISCIPLINES **6**

- Forensic Revenue Assurance (Assessment and Investigation) 6
- Operational Revenue Assurance (Controls Management) 7
- Corrections Management 8
- Compliance 8

REVENUE ASSURANCE SCOPE (DOMAINS) **8**

- Formal definition and communication of scope 9
- Vertical Assurance Domains 9
- Horizontal Assurance Domains 10

LEVELS OF ASSURANCE (OBJECTIVES FOR REVENUE ASSURANCE ACTIVITY) **11**

- Leakage identification and containment 11
- Revenue Risk Containment 11
- Margin and Rate Plan Assurance 12
- Revenue Stream Assurance 12
  - *Network Asset Downtime and Revenue Loss* *12*
  - *Churn and Brand Equity Erosion* *12*
- Fraud 12
- The two dimensional definition of RA Scope 13

ORGANIZATIONAL AND OPERATIONAL PRINCIPLES AND ETHICS **13**

- A. Consensus 13
- B. Integrity 13
- C. Rationalization 14
- D. Corporate Responsibility 14
- F. Competency Requirement 14
- G. Transparency Requirement 15
- I. Operational Independence Requirement 15
- J. Responsibility and Relationship to Management 15
- K. Responsibility and Relationship to Operational Managers and Peers 15
- L. Maximum Effect for Minimum Cost 16
- M. Responsibility and Relationship to Related Departments 16
- GRAPA Inter-organizational Principles (Review) 16

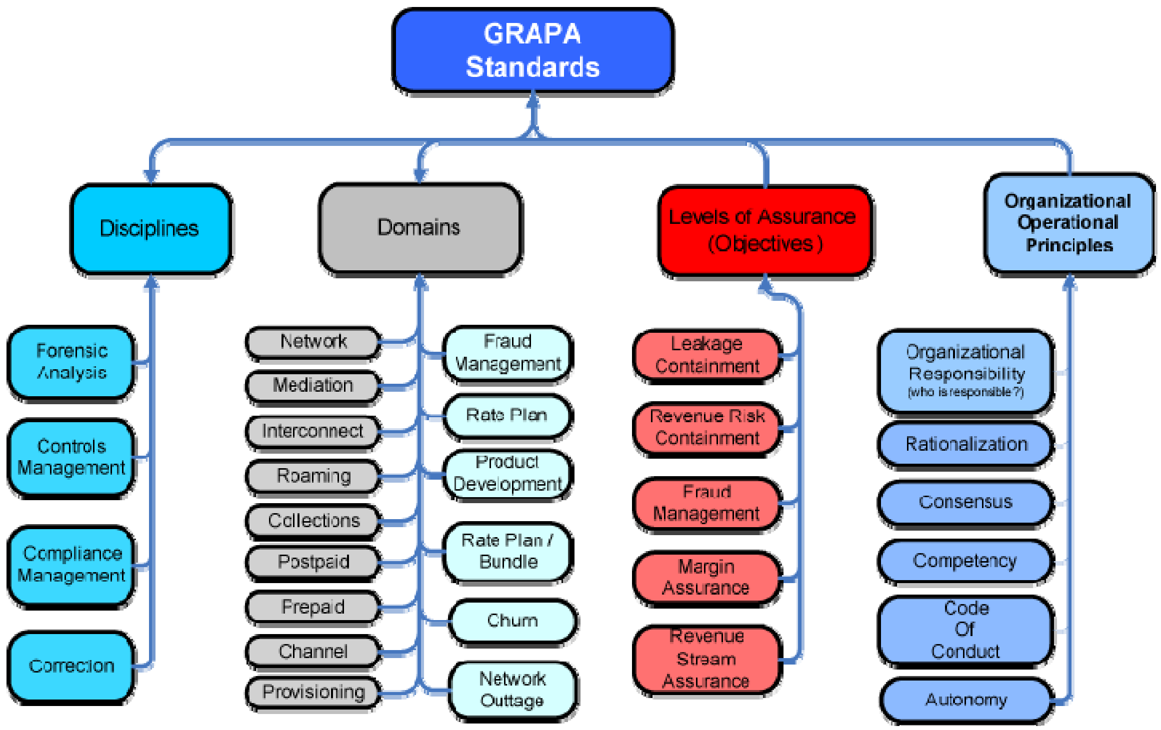
The GRAPA Standards – Overview

This document summarizes the current working draft of the GRAPA standards as proposed for ratification. These standards have been developed based upon the input provided by hundreds of revenue assurance professionals around the world communicated through face-to-fact interviews, online benchmark students and participation in GRAPA “Town Hall” meetings.

In December of 2008, the GRAPA membership will be asked to review these standards and ‘ratify” them through an online voting mechanism. In 2009, those standards that are ratified will be published.

The standards document is organized into the following sections:

1. Definition – this serves as the foundation for the rest of the standards document.
2. Disciplines – a definition of the major functions that are associated with the performance of revenue assurance.
3. Domains (vertical and horizontal) – which provide the revenue assurance professional with an ontology for the division of expertise and responsibilities across the Telco organization.
4. Mission and Objectives – a clear statement of the different reasons for the execution of revenue assurance functions and the foundation for the establishment of meaningful and actionable revenue assurance KPI’s.
5. Ethics and Principles – a statement of the underlying principles and objectives which define how a revenue assurance professional should conduct him/her self in relations with the community, management, operational peers and related disciplines.



GRAPA Standards
Disciplines
Domains
Levels of Assurance (Objectives)
Organizational Operational Principles
Forensic Analysis
Controls Management
Compliance Management
Correction
Network
Mediation
Interconnect
Roaming
Collections
Postpaid
Prepaid
Channel
Provisioning
Fraud Management
Rate Plan
Product Development
Rate Plan / Bundle
Churn
Network Outtage
Leakage Containment
Revenue Risk Containment
Fraud Management
Margin Assurance
Revenue Stream Assurance
Organizational Responsibility
(who is responsible?)
Rationalization
Consensus
Competency
Code Of Conduct
Autonomy

Definition of Revenue Assurance

What is revenue assurance? In its simplest The protection of the telco's revenue streams.

At the foundation of the revenue assurance job is the definition of what it actually is.

There are many different definitions of revenue assurance in use in the industry today and each do a good job of defining one aspect or another of the discipline. However, a truly comprehensive definition must include all of the different aspects without limiting the understanding of its full scope and import.

In general, in the telecommunications industry, the term "revenue assurance" is utilized to describe a collection of techniques, tools and operational disciplines whose objectives are the maximization of revenue recognition, and minimization of revenue loss.

The fundamental objective for revenue assurance activities therefore is to help management with the assessment and containment of the risk of revenue loss due to operational inconsistencies and anomalies, errors, fraud and other sources.

At the most fundamental level, revenue assurance can include the detection and elimination of revenue loss exposures, at its most advanced it can include the forecasting of future revenue loss exposures and the proactive participation in development of new products or operational improvements to help prevent the risk exposure in the future.

Risk exposures come from several sources involving gaps in:

1. Process Integrity – Clearly, one of the major reasons for the failure of telcos to realize and capture all of their revenues is a breakdown in the integrity of their operational systems. Therefore, understanding and improving process is one aspect of revenue assurance.
2. Systems integrity – In addition to the revenue exposures created by process integrity problems are another large set having to do with the integrity, accuracy and efficiency of computer systems. Problems with the way that network based systems function (OSS) and business based systems perform(BSS) both contribute to these problems as well.
3. Personal Integrity – In many situations, revenue loss will occur because employee or customers perform their jobs or participate without integrity(sloppy, careless or vindictive) or with the actual objective of theft. Revenue assurance must guard against these cases as well.

It is the objective of revenue assurance to protect the telcos revenues against these gaps.

The simple, one line mission of revenue assurance would therefore be:

To protect the companies revenues against any and all risks identified as described in the following standards document.

The following pages provide greater detailed information about each of these areas.

Who is responsible for performing Revenue Assurance?

Revenue assurance, that is the protection of the companies revenue streams is the job of every employee of the organization. The assignment of individuals to the performance of different revenue assurance jobs, within different domains is a determination made by each company based upon their need to accomplish “maximum impact for minimum cost”.

In some organizations for example, the Forensics Analysis job is relegated to the internal audit function.

In other organizations, corrections is left to the change management or business process reengineering group.

It is not the intention of the GRAPA organization or these standards to dictate who or which department should do which job, but only to specify which jobs need to be done, and how.

There are some companies where the officially designated revenue assurance department is responsible for all of these functions. There are other companies where the official RA department has responsibility for only a few specific domains and assurance levels.

These standards are designed to support all of these scenarios.

The Revenue Assurance Disciplines

The practice of revenue assurance can be divided into 4 major disciplines. Each of these disciplines focuses on a different aspect of revenue recognition, revenue loss prevention and revenue risk containment objectives.

Forensic Revenue Assurance (Assessment and Investigation)

When a particular area or domain is identified as a candidate for revenue assurance attention, the first responsibility of the revenue assurance practitioner is to perform a preliminary assessment in order to understand:

- How the area functions
- What the major revenue risk and loss vulnerabilities are
- What the different ways the containment or repair of the risk might be

Key to this process is that the analyst QUANTIFY the RISK or LOSS . (In other words, determine the degree of loss or risk in measurable and reportable terms).

The basic tools utilized in the performance of an assessment are known as Forensic Revenue Assurance Techniques (See the Forensic Revenue Assurance section of this standards document for detailed information about these techniques).

Upon completion of the assessment a report will be made summarization:

- the size and extent of revenue risk or loss
- a recommendation regarding how the areas should be covered in the future.

Recommendations for followup can include:

- the scheduling of another assessment at a future date
- the creation of a set of operational controls (controls management)
- a serious reengineering of aspects of the operation (correction)

Operational Revenue Assurance (Controls Management)

If the findings of the Forensic Revenue Assurance analysis indicate that the area under consideration harbors a level of risk higher than that set by management, a recommendation for the creation of a coverage plan will be required.

A revenue assurance coverage plan is a well defined, systematic plan for the continuous monitoring and reporting of the risk of loss, or the actual revenue loss within a specified area.
The key to a coverage plan is the identification and implementation of “controls”. Controls are operational mechanisms (systems, reports, procedures) which allow the business to keep track of the revenue, loss of revenue and risk of revenue loss, and report that to management on a regular and reliable basis.

Coverage plans can be light (involving changes in existing procedures, and recommendations for periodic review) or heavy (involving recommendations for the installation of monitoring controls, new policies and procedures or even the creation of new departments or functions). (For more information about coverage plans see the “Forensic Revenue Assurance” and “Operational Revenue Assurance” sections of this standards document.

Coverage plans are developed in order to provide management with assurance that the desired level of risk of loss is maintained for each area under consideration (each explicitly identified domain).

Responsibility for the execution of a coverage plan is left up to management to decide. Primary responsibility for execution of a coverage plan will fall to the operational manager that is responsible for the area being assured, however, the revenue assurance team, or some other group , may be asked to assist that manager if there are operational or other constraints.

Corrections Management

Corrections management is the process of making sure that any recommended changes to procedures, operations or systems are implemented in a timely, efficient and effective manner.

The person managing the corrections process is the person that assures management that the corrections that have been identified are implemented per specification. Responsibility for the execution of a correction is most often relegated to the operational manager responsible for the area under review. Sometimes a specialist or an RA practitioner will be asked to step in and assist with the process.

Compliance

Compliance management is the process of reporting to management on:

- the status and progress of all forensics activities
- the status and progress of specified corrections activities
- assurance that all specified controls are being utilized and reported and that all escalation events (events that indicate that a risk or loss has gone beyond the levels set within the control) are being followed up

Revenue Assurance Scope (Domains)

The scope of revenue assurance can include any and all areas defined by management as the area with which they are to be concerned. Some organizations restrict revenue assurance to an extremely narrow scope, while others define its scope to include a wide range of areas.

Under the Definitions of GRAPA , the scope of revenue assurance will be indicated by the areas defined as in-scope by top management. There is no recommendation or preference for which areas to include.

In order to be considered to be “within the scope” or revenue assurance, the area must meet the following criteria.

a) The area must be formally defined and assigned by management
b) The formal declaration of scope must include a domain (vertical or horizontal) and an assurance level. (see next section)
c) An initial Forensic Assessment is performed in order to define and assess the risk before controls or corrections are attempted.
d) Based upon the findings of the risk assessment, and management’s appetite for risk, the RA team will then proceed to either develop a coverage plan for the area, or simply retain it for future scrutiny.

Formal definition and communication of scope

In order to effectively and efficiently organize the development of skills and approaches, and in order to accurately communicate domains, GRAPA utilizes the concepts of vertical and horizontal domains.

A domain is the term utilized to define that collection of systems, operations and functions are included within the scope of the RA activity. Each domain brings with it a unique:

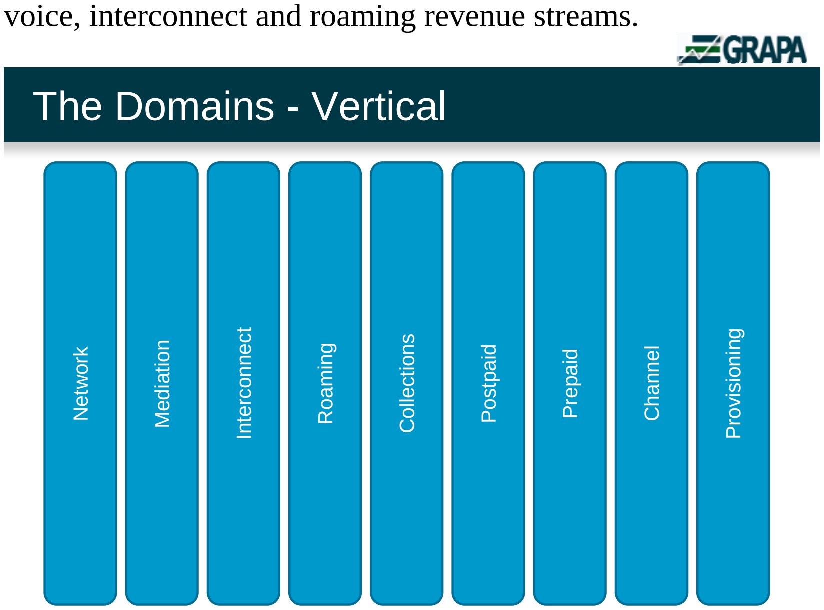
- Operational Environment
- Vocabulary and terminology
- Operational principles
- Business objectives
- Revenue assurance issues and approaches
- Revenue risks
- Industry standard controls

Only by clearly identifying and organizing the scope of the revenue assurance function can we begin to develop a standard set of controls, procedures and KPI's around its practice.

Vertical Assurance Domains

This is the assurance of one particular operational area within a larger revenue management chain. A vertical domain is a system, department or operation involved in the capture, processing or management of revenue information that can and often does perform that function for a number of different revenue streams. (Revenue collected for multiple lines of business or products).

For example, a mediation system typically provides operational support for the postpaid voice, interconnect and roaming revenue streams.



The inventory of vertical domains includes systems and BSS or OSS components:

I. Network elements (switches, gateways, IN, servers, SMSC, MMSC and other components)
II. Mediation Systems
III. Postpaid Billing Systems
IV. Interconnect Billing Systems
V. Roaming Billing Systems
VI. CRM Systems
VII. Customer Management Systems
VIII. Point of Sale Systems
IX. Provisioning Systems
X. Sales Channel Management

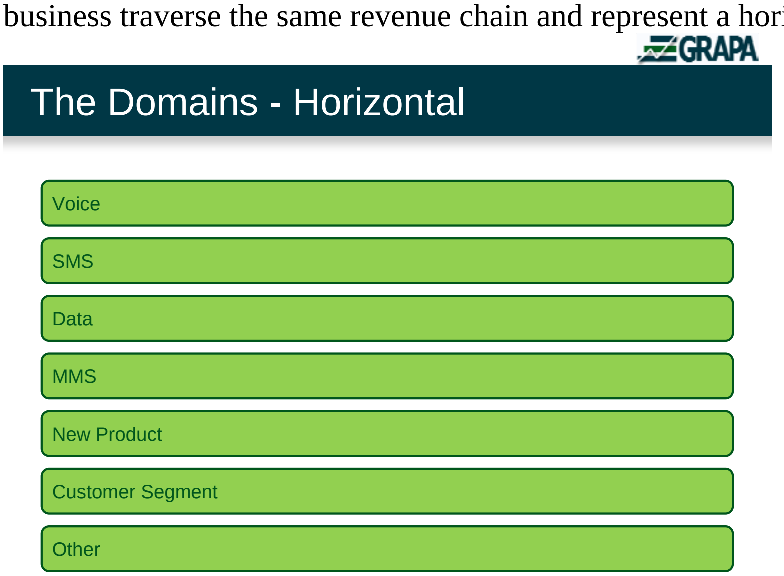
Or operational areas or departments like:

I. Collections
II. Credit Management
III. Fraud Management
IV. Sales Management

Horizontal Assurance Domains

Horizontal assurance is the comprehensive tracking and assurance of revenue transactions across all of the systems that touch that transaction within the same revenue stream. Typical horizontal assurance activities include test calls, call traces, CDR tracking, customer provisioning audits, product audits and other related activities.

Horizontal domains describe a subset of revenue related transactions across their entire revenue management chain. Typically, all transactions for the same product/line of business traverse the same revenue chain and represent a horizontal domain.



Horizontal domains include:

I. Product Lines
    a. Voice
    b. Data
    c. SMS
    d. MMS
    e. TV
    f. Streaming
    g. IP
II. Specific Products / Rate Plans
III. Customer Segments or Markets

Levels of Assurance (Objectives for Revenue Assurance Activity)

The first step in the assignment of revenue assurance responsibilities is the clear identification of the domain within which the activity is to be performed. The next step is then the identification of the “level of assurance” or the objective for that RA activity.

The word “assurance” can mean a lot of different things and management will in most cases require the revenue assurance team to apply a different level of “assurance” to a different domain.

The definition of revenue assurance needs to include the allocation of different “levels” of assurance to different areas, based upon management’s direction.

The five levels of assurance include:

Leakage Containment

This is the lowest and least comprehensive of the levels of assurance. It is also the most traditional and conservative of revenue assurance objectives. Assuring against leakage and containment requires revenue assurance practitioners to seek out situations or systems where revenue that has been earned is not being accurately processed.

The job of revenue assurance in these cases is to find, diagnose and correct the leakages in an efficient and rationalized manner.

Revenue Risk Containment

At a higher level of assurance, revenue assurance can set out to do more than simply FIND LEAKAGE THAT HAS ALREADY HAPPENED, but can actually get proactive and anticipate potential leakage situations and function to eliminate the risks before a leakage occurs. The saying “an ounce of prevention is worth more than a pound of cure” certainly applies in this case. When the revenue assurance practitioner actually prevents a revenue loss condition from developing, they contribute a significant added value to the firm at a significantly reduced cost.

It is for this reason that RA teams are getting involved in new product development and are creating change management procedures for network, billing and other operational groups.

Margin and Rate Plan Assurance

Another area where revenue loss is sharply felt by telcos' is in the area of pricing for different products and services. The creation of "bundles" , "loss leader" and "combination offers" create exceedingly complex revenue tracking scenarios that can ultimately cost the company money because of the lack of a comprehensive revenue protection based analysis of the assumptions behind its development.

The assurance of revenue recognition and accounting for revenues properly is a specialized and critical aspect of some revenue assurance domains.

Revenue Stream Assurance

Many telcos are asking their revenue assurance teams to get even more proactive in their efforts. These managers define the assurance of revenues to include the protection and monitoring of risks not only to the actual revenues earned, but to the assurance of an expected revenue stream.

There are several ways that revenue stream assurance is being included:

Network Asset Downtime and Revenue Loss

When a carrier invests large sums of money in the installation of major network components (like and MSC) and that element suffers a number of outages, there can be significant and catastrophic revenue impacts. In the past management tended to relegate these issues to the "network issues" category, but most are discovering that they need to keep track of , account for and manage these exposures to the revenue stream in the same manner as the rest of the exposures we have been discussing.

Churn and Brand Equity Erosion

Equally interesting is the way that astute CFO's are realizing that customer churn and the cannibalization of brand equity represents a major erosion to the revenue stream as well. These groups also include churn as a valid RA issue.

Fraud Management

It has long been understood that there is a large amount of overlap between the domain, tools and scope of the fraud management function and the revenue assurance function. GRAPA benchmarks show that the vast majority of telcos have been to include fraud as a integral component of the overall revenue assurance mission. Clearly, the vast majority of fraud cases represent significant and credible threats to the companies revenue streams and is appropriately included as a possible level of coverage.

The two dimensional definition of RA Scope

The definition of the scope of any revenue assurance activity, therefore, includes 2 dimensions. First, the declaration of a domain that is to be included, and secondly, the objective set for the assurance of that area.

For example, management may tell the RA team that they want them to take responsibility for the:

Churn (level of assurance) for Prepaid Voice Customers (horizontal domain).
Leakage (level of assurance) in the mediation system (vertical Domain)
Or
Risk of loss (level of assurance) regarding the security of network elements (vertical domain)

This two dimension method of scope definition provides the RA professional with a clear, standardized method for the identification and standardization of tools, vocabulary and measures.

Organizational and Operational Principles and Ethics

The the execution of revenue assurance is a responsibility similar in scope and trust to that of any other financial assurance profession (like auditing or financial reporting). For this reason it is critical that our members subscribe to a code of ethics that assures that the work that they do, and the findings that they report can be trusted. The GRAPA principles and ethics statement summarizes these areas of concern. The core principles describe the foundational concepts upon which the practice of revenue should be based. These include:

A. Consensus

It is primary objective of the revenue assurance team to promote cooperation between the operational teams involved in each of the different aspects of revenue management, accounting and delivery. Revenue assurance should be a vehicle for collaboration first and foremost. The goal of RA is to create a solution that involves the consensus of all parties involved. RA is not an internal audit or policing function, it is a problem solving function and most problem solving requires the willful cooperation of all parties involved in the problem.

B. Integrity

All revenue assurance activities are to be performed with a primary focus on the integrity of the activities performed. Integrity includes the integrity of relations with other managers, the integrity with which the job is conducted and the integrity of the findings and reporting utilized.

C. Rationalization

All revenue assurance activities should be based on the principle of rationalization of investment. Any investment of the companies' resources (time, money, effort) in pursuit of revenue assurance objectives must be balanced against the anticipated benefit in risk reduction, revenue retention or revenue maximization anticipated. The RA practitioner is responsible for understanding, documenting and assuring the rationalization of all investments and decisions.

Every revenue assurance decision requires that a balance be struck between the degree of risk mitigated and the cost of accomplishing that degree. The revenue assurance team will at all times be aware of this tradeoff and make the rationale and criteria for making those decisions clear.

D. Delegation of Responsibility for RA

It is not the job of the RA Professional to insist that they do all of the RA job. The overriding goal of the RA professional is to make sure that the RA job is performed with integrity with a goal of maximum effectiveness for minimum cost.

The directive to accomplish maximum effectiveness for minimum cost means that the RA manager will work with other departments (operational teams, operational managers, internal audit, I/T and other groups) and encourage the development of solutions, and the allocation of responsibilities in a manner that makes the most sense for the entire organization.

E. Corporate Responsibility

It is the responsibility of the revenue assurance practitioner to stay alert for and aware of any and all risks to the revenues of the firm and well as to any assets of the firm that are involved. The RA practitioner will always and without fail report any serious risk of loss to the appropriate agencies or authorities whether it is directly within the scope of the RA persons responsibilities or not.

F. Competency Requirement

Revenue assurance functions should be staffed with those who collectively have knowledge and skills necessary to conduct RA activities. Outside consultants with requisite knowledge may need to be hired to complement internal staff. GRAPA recommends staff receive a minimum number of hours of continuing education each year and maintain a record of training. The RA practitioner is responsible for conducting activities with competence.

G. Transparency Requirement

All RA activities are to be conducted in a straightforward and transparent manner. All processes and activities are to be documented and published for review of the appropriate persons involved. Forensic analysis techniques, assessment reports, quantification findings, correction and control recommendations should be clearly documented and published in a manner that makes the process, intention and results clear to all parties involved.

I. Operational Independence Requirement

Each revenue assurance professional is responsible for maintaining independence so that opinions, conclusions, judgments, and recommendations will be viewed as impartial by third parties. This includes personal, external, and organizational impairments.

A personal impairment might be financial relationship, and an external impairment might be unreasonable *restrictions on the time* to complete an assurance activity. To achieve organizational independence RA organizations and compliance professionals should report the results of their assessments and compliance findings and be accountable to the head of the organization and should be *located organizationally outside the staff or line function* being reviewed or reported upon.

This helps to ensure that staff is free from political repercussion. (Assessment and Compliance reporting should be done separate from the operational unit. RA teams may also perform operational reporting as long as the team reports to the RA team not the operational team).

J. Responsibility and Relationship to Management

It is the responsibility of the RA practitioner to assess and report actual revenue loss, potential revenue loss and to assess the potential risk of loss due to leakage or fraud to management.

It is management's responsibility to review and decide upon the degree and nature of the mitigation of that risk (if any).

RA professionals do not choose levels of risk or determine policies regarding how operations should be performed or who should perform what task. That is the responsibility of management.

K. Responsibility and Relationship to Operational Managers and Peers

It is the responsibility of the RA practitioner to work with and assist operational managers with the accuracy , efficiency and effectiveness of their operational areas. The addressing of leakage, risk of loss or other risk or fraud exposures are the clear and full responsibility of the operational team in assigned to that area.

Revenue assurance is present to assist those operational teams but not to assume their responsibility.

(unless at the explicit direction of top management the RA team takes on certain aspects of this operational responsibility).

L. Maximum Effect for Minimum Cost

It is the responsibility of the RA professional to always attempt to attain the maximum impact (in terms of the reduction of revenue loss, risk of loss or other objective) for the minimum investment. The best cost solution is always preferred.

M. Responsibility and Relationship to Related Departments

It is the responsibility of the RA practitioner to work with and assist the people responsible for Internal Audit, Business Process Reengineering or any other staff discipline which might overlap with the scope or RA. The objective of RA is to attain maximum impact for minimum cost and if the related department can do the job (Forensics, Controls Management, Compliance and Corrections) better, faster or more efficiently, then it is the responsibility of the RA practitioner to do everything possible to help that group to accomplish those objectives.

GRAPA Inter-organizational Principles (Review)

Under the GRAPA standards, it is the responsibility of the Revenue Assurance practitioner to assess and report on the risk of revenue loss, or the extent of revenue loss suffered within a particular operational area as directed by management , and in cooperation with the operational manager responsible for the area under review.

Based upon these guidelines, the following conclusions ensue:

1. It is the job of RA to assess risk and loss only in areas where management has directed it to. It is not the job of RA to look for risk without this direction.
2. It is the job of RA to report the risk of loss, but it is NOT the job of RA to recommend or enforce a particular level of loss. The appetite for risk, and the level of acceptable risk is a parameter set explicitly by the management team.
3. If so directed, the RA team can be commissioned with responsibility to investigate, develop and promote recommendations for the reduction of a risk exposure from its current level, to a level set by management.
4. The RA team will only be involved in the assessment of risk and loss in areas where the manager responsible for the operational area in question has agreed to cooperate. We believe that it is impossible to accurate assess risk , report risk and remedy risk without the full commitment of the operational management team.
5. The RA team can be invited by the operational manager, or by top management to proactively and aggressively assist the operational manager in the assessment of his risk exposure and in the development of a coverage plan.
6. Coverage plans and the institution of new controls must be approved by operational managers and top management before they are to be executed.

7. Primary responsibility for the execution of a coverage plan and implementation of new controls will be the responsibility of the operational manager.
8. The RA team may assist or execute a coverage plan at the request of top management and/or the operational manager.
9. Compliance reporting will be developed as part of the coverage plan, and all ultimate compliance and risk/loss reporting will be managed by the RA team, separate from the operational area.