A Framework for Assessing Revenue Assurance Capabilities

by Rob Mattison
There are many reasons for wanting a systematic and comprehensive assessment of a firm’s current revenue assurance capabilities. Sometimes it’s just a matter of taking an objective inventory to be sure that everything is working as it should. At times, there are questions or concerns that some areas are not working as expected. Other times, background information is required to assist with major investment or reorganization decisions.

Over the past several years, we have had opportunity to conduct several assessments of this type, and we have included here a summarization of the key areas and issues that are typically evaluated.

Using the Assessment Framework

The assessment framework we are describing can be utilized to address a number of different situations.

For example, a manager may want an external consultant to perform the evaluation in order to get an objective outsider’s view of what is really going on.

Or, the manager will simply question personnel to make sure that all perspectives that have a bearing on RA effectiveness are being taken into account. This would be a kind of internal sanity check.

In some cases, formal documentation is requested in order to provide information for the training or orientation of new personnel, or for the quick indoctrination of vendors and consultants in the breadth, depth and scope of the RA group’s operations and procedures.

You Need to Know What You Have, Before You Can Decide What You Need

Probably the most important value that an assessment of this nature can deliver to your organization is a badly needed inventory of just exactly what the current status is and where the needs for enhancement are most urgent.

An inventory of this type can assist in the requirements prioritization process and, most critically, makes it possible to assure that investments made will have a balanced impact on the overall capabilities of the revenue assurance group.

The Major Assessment Areas

We have found the following major assessment areas to be most useful in getting a comprehensive view of a firm’s Revenue Assurance capabilities.

- Organizational Structure — Which departments and groups are responsible for what functions? How are they organized around the RA functions? What proportion of time is allocated to RA activity?

- Operational Environment — How are RA issues raised? Who is responsible for doing what? How are RA issues resolved?

- Computer Infrastructure — Which computer systems are dedicated to the RA functions? Which systems are accessed by RA on an as-needed basis?

- Staff Evaluation — What people are involved in RA? What are their skills and capabilities?

- Leakage Maps — A high level summarization of current leakage across the revenue recognition (CDR tracing), invoicing, and revenue realization (collections) management areas.

- Coverage and Credibility Assessment — A subjective assessment by key executives, giving their perceptions of how well RA is doing its job in terms of both the coverage of RA issues (ability to get answers across all of the different operational areas) and the confidence they have in the numbers they receive.

- Budget Review — Review of the funding currently dedicated to RA activities
**Assessment Dimensions**

Assessing the readiness and effectiveness of Revenue Assurance in general is difficult because RA covers so many different operational and functional areas. To perform a comprehensive review requires assessment by each operational area and for each of the major RA disciplines.

The major RA operational coverage areas include:

- Network Operations
- Mediation
- Postpaid Billing
- Prepaid Billing
- Interconnect
- Roaming Reconciliation
- Collections and Settlement
- Dunning
- Fraud
- Cross System Synchronization
- End-to-end Revenue Management Chain

Capabilities in each of these areas need to be assessed in view of their ability to deliver in each of the four major disciplines:

- Investigation
- Monitoring
- Base-Lining
- Auditing

This means that, at a minimum, you need to perform an assessment of 11 operational areas by 4 disciplines or 44 different areas (11x4=44), and this is in the simplest case. Often, there are many more dimensions to take into account.

### Organizational Structure Review

The first and easiest evaluation to conduct is a quick review of the organizational structure that is in place to support RA. The biggest challenge here is that, while it will usually be easy to identify who the “official” Revenue Assurance people are, it is much more diffi

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cult to identify all of those “collateral” support people that are so critical to successful RA operations.

For most organizations, the officially designated RA group represents only a very small percentage of the overall manpower that is expected to participate when RA issues arise.

To be effective, our organizational assessment must take into account the execution of all disciplines across all operational frontiers. The table below highlights the scope of organizational alignment that the assessment should make clear.

There are really two questions that we need to have answered in order to be comfortable that we understand how the complete scope of revenue assurance is being managed from an organizational perspective. What we need to know is:

1. Informational Responsibility — Who is responsible for delivery of information, assessment of that information, and for responding to issues that come up?

2. Managerial Responsibility — Who is responsible and in authority to make decisions when conflicts, inconsistencies and inaccuracies arise?

To assist in evaluating the organizational coverage of revenue assurance, the following table is typically utilized. The name of a specific department or group should be provided in each box. What it critical about filling in this chart, is to be sure that the organization that is identified understands and takes responsibility for delivery of that functionality and that it has personnel assigned to the tasks, budget allocated for it, and experience in delivering it.

**Organizational Assessment Challenges**

Several interesting issues have come up in the past when we have tried to perform this kind of organizational assessment of RA.

First, we found that there are areas where no one is sure who is responsible.

Second, different people have different opinions about who is responsible for what.

Third, there are areas where no RA has ever been done and no consideration has been given to who should conduct it.

In all cases, we found that, by establishing a simple organizational responsibility map, we have created a good foundation for further investigation.

Identifying the groups with responsibility in different areas is relatively easy at this stage. As we get deeper into our evaluation of the organization’s capabilities, however, we begin to discover the “hidden” deficits in the overall coverage of RA functionality.

**Operational Environment Review**

The second area of revenue assurance activity to review is how RA is actually done. We want to understand the policies, procedures and processes that people follow when revenue assurance issues are raised.

Here is where we begin to uncover how well thought out the revenue assurance function has been. To understand how formally or informally revenue assurance issues are managed, we will want to have the following questions answered:

- How are issues raised?
- How are issues prioritized?
- How are issues resolved?
- How are decisions made in each area?
- Is the process monitored?
- Is there management oversight on the decision-making process?
- What kinds of Service Level Commitments are made to the requestors of services?
- What processes are in place to evaluate, measure and review the performance of the group?
When evaluating the operational aspects of RA, we find it best to review these capabilities by each of the four major disciplines (investigation, monitoring, base-lining, and audit).

**Operational Investigation Issues**

The investigations discipline involves identification of issues and questions that are out of the ordinary, and the rapid, accurate resolution of those issues.

There is a broad range of questions that can come up, and may be raised by customers, call center reps, employees, managers, regulators, and others.

Some of those questions can be answered by quick referral to an existing report. Others may require hours of in-depth tracing and analysis. This broad range of responses makes tracking of investigation activity especially difficult.

To assess the organization’s investigation capabilities, the questions we need to have answered include:

- How does someone raise an issue for investigation?
- Who is the issue referred to?
- How does that person assess and prioritize the issue?
- Is the issue documented?
- Is resolution of the issue tracked?
- What mechanism is provided for escalating the investigation requests as requirements for monitoring, baseline or audit development?

Documentation of investigation issue handling is typically handled with procedure manuals, log pages, and other supporting documents. Often, process flow charts or decision trees are developed to help people understand exactly how issues are routed through the organization.

**Operational Reporting Issues**

We have identified two major categories of reporting activity that the typical RA group participates in — monitoring, which reviews the operational performance of a particular system and base-lining, which reviews the overall performance of the revenue management chain itself.

For purposes of evaluation, the questions we need to ask are the same for both, though the answers will most probably be different for each group. To understand the operational coverage in these areas, the critical questions to ask are:

- Who are reports made available to?
- How does one request access to information?
- What are the approval procedures?
- Is adequate training and interpretation provided?
- What is the procedure for enhancement or modification of reports?
- How is quality assurance of reports handled?

The goal of the assessment is to identify and formally capture what is understood to be the procedure and policy in each case.

For the monitoring reports, it is often helpful to collect the answers to these questions on a system-by-system basis since operational reporting is usually handled very differently for each system. For the baseline reports, there should be no reason to break the analysis down to individual systems or reports.

**Audit Issues**

Evaluating the audit capabilities of the organization is probably the most difficult of all areas. When we assess the operational characteristics of audits, we need to review:

- How are audit procedures defined, designed, documented, and managed?
• How are audits scheduled, reported and monitored?
• What quality assurance processes are associated with each audit area?
• Who decides the need to create new audit capabilities and how are these decisions prioritized?

The collection of audit information will include:
• Interviews with the people performing and managing audit activities
• Review of audit documentation and procedures manuals
• Review of audit schedules, results and quality assurance reports
• Review and documentation of audit development procedures

**Computer Infrastructure Review**

One of the most complicated and critical of the different aspects of an RA environment is the computer systems infrastructure utilized by the group. The process of defining the RA computer infrastructure is far from simple because so much of the RA group’s work is dependent on “borrowing” access and resources from other systems.

We, therefore, need to perform the same kind of two-dimensional (discipline vs operational system) review that we did for the organizational structure review. What we want to know for each discipline and for each operational area is what systems are used. There can be several answers to the question depending upon the area in question.

In some cases the computer infrastructure will be a system managed and controlled by the RA group itself, as in the case of an RA baseline reporting system or a mediation data warehouse. In other cases, the support system will be a borrowed system, such as a shared data warehouse or common reporting database. In other situations, it will be the actual source operational system itself.

In all cases, we will want to know, not only which system is used to provide the informational support, but what type of access the RA group has.

We typically categorize the type of access as:
• RA group dedicated system (RA)
• Shared system with unlimited access (SU)
• Shared system with limited access (SL)
• Operational source system (OS)

Identifying these sources can quickly provide us with a roadmap of exactly where we need to go to get certain information and how difficult it is to manage the process. A typical results table for this analysis is shown.

**Staff Evaluation**

An organization’s proficiency in delivering revenue assurance capabilities is defined, first and foremost, by the skills and dedication of the people assigned to the performance of the major RA tasks. There are several different functions involved in RA operations and it is important that we understand the level of coverage afforded in each of these areas. Included in RA support are six major categories of support personnel. They are:

1. Revenue Assurance Analysts — The “official” revenue assurance analysts (including evaluation of their skills in the areas of investigation, CDR tracking, CDR block tracing, audit design, audit monitoring, report design, report review, and the other key RA analyst skills)
2. RA Specialists — The people dedicated to particular RA business functions (such as auditors)
3. RA Report Support — The people dedicated to maintenance and delivery of existing monitoring
and baseline reports (this to include: business analyst, ETL technician, DBA, report writer, administrator)

4. RA New Systems Development — New system development (also includes: business analyst, ETL technician, DBA, report writer, administrator)

5. Investigators — The people dedicated to investigation activity (and their skills in the areas of CDR trace, CDR block trace, statistical analysis and sampling, data analysis, data manipulation, familiarity with source systems, and other investigator skills)

6. Source System Experts — The people utilized as source system experts in each of the operational areas

Our evaluation of the RA support staff will be one of the most complex and exhaustive. For each category of support person, what we want to know is:

- Who is dedicated to this type of support for each operational area?
- What skills do they have and at what level (on a scale of 1-10 where 1 is none and 10 is expert)
- What is their level of familiarity with the area they are responsible for (typically measured on a scale of 1-10 where 10 is an expert who knows everything and 1 is a novice who knows nothing)?
- What is the proportion of time they are dedicated to this function?

We will find that we need tables to cover personnel in each of the areas to be evaluated (disciplines and operational areas) for all of the six personnel support areas — RA analyst, RA specialists, auditor, existing system support, new system development (BA, DBA, ETL, RW, Admin), and operational system expert.

The tables providing this information will be similar to the others we have discussed. An example of one possibility is shown.
The completion and review of the RA support staff inventory will often be the most informative and indicative of what an organization’s true RA capabilities.

**Staff Evaluation Issues**

By far the biggest issue uncovered by staff evaluation is the realization that there are many areas where no one is available to answer the questions, or where the people identified are either grossly under-qualified or severely under-allocated to the task.

By going through the painful discipline of trying to answer all the questions and filling in the tables, we gain valuable insight into the true nature of our RA delivery capability and where staff improvement is most needed.

**RA Leakage Map**

From one perspective at least, the primary function of Revenue Assurance is the identification, measurement and eradication of leakage. Understanding exactly how much leakage there is today and where it is happening would greatly assist us in our assessment of RA.

When it comes time to answer this question, of course, we are faced with a conundrum. Since it is the job of RA to identify new sources of leakage and to rectify them, how could we possibly tell you up front how much leakage was occurring? By definition, if I could answer the question, I wouldn’t need an RA function to begin with.

Although it would be unrealistic to expect an RA organization to provide us with a 100% accurate and reliable appraisal of where and how all of the different leakages are occurring, it should certainly be possible to get some benchmarks and high level summary indicators of the overall health of the revenue management chain and the revenue assurance process that monitors it.

A typical spot-check leakage map of this type would simply provide the following information to the highest degree of accuracy available to the RA group at any given point in time. (Bearing in mind, of course, that the whole purpose of our assessment is to figure out how we can improve the accuracy of the measurement and reduce the associated leakage.)

The leakage map comes in three parts, measuring each of the three major “legs” of the revenue management chain.

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1. Revenue Recognition — an assessment of the number of minutes delivered by the network, processed by mediation, and accepted into the four major billing systems (postpaid, prepaid, interconnect, and roaming), with an indication of how many minutes or number of calls are lost at each step.

2. Invoicing — an assessment of the total number of minutes delivered to each of the four major billing systems, with an indication of how many of those minutes were converted into billable revenue and at what average rate per minute.

3. Revenue Realization — an assessment of the total revenue amount invoiced and the corresponding level of collection.

Under optimal conditions, an RA group will have access to baseline reports that accurately and authoritatively report these three critical leakage maps with little or no trouble. Under less than ideal conditions, a considerable amount of manual compilation may be required. In all cases, it is always possible to generate some kind of leakage map that can be used by the assessment team.

Of all the different parts of this assessment, no deliverable is more useful to more forms of analysis than this leakage map. For this reason, the leakage map is considered to be the only component of the assessment framework that is absolutely mandatory!

### RA Coverage and Credibility Assessment

Being aware of the organization’s current leakage exposure, as reported by a leakage map, is one critical aspect of assessing how well the RA job is being done, but it is far from the only one. To interpret the leakage map, we also need to understand how thoroughly, accurately and authoritatively the RA group is performing the tasks that allow them to report those numbers. We refer to this as the coverage and credibility dimension.

Revenue assurance is actually a collection of hundreds of minor investigation, monitoring, and auditing activities across dozens of dimensions, and the validity of the leakage map is only as good as the thorough-

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ness and accuracy with which each of those areas is covered.

For an overall appraisal of the depth, breadth and confidence that the organization assigns to RA activities, we typically interview executives and ask for their ranking along two dimensions.

First, we want to know how well they believe a particular area is being monitored and audited (reported as a proportion of coverage where 100% means that everything that needs checking is being monitored and where 0% means that nothing is being done).

Second, we ask for their appraisal of how confident they are that the numbers delivered are accurate.

After conducting these individual interviews, the results are summarized in the form of a table that provides us with a coverage/confidence mapping of the entire RA function.

Available Budget

Although we don’t have much say in the matter, no assessment of RA would be complete without a review of the budgets associated with delivery of the capabilities. Budget evaluation needs to include not only the “official” RA group budget, but must also factor in all of the collateral costs associated with RA delivery (namely the computer support systems and non-RA staff that assist with RA solutions).

Making Use of Assessment Results

Having conducted many assessments of this type, we can state with confidence that …

1. It will be more difficult than you expected

2. You will uncover areas of exposure and vulnerability that you were unaware of

3. You will learn a lot about your current RA activities that you didn’t know about

The objectives you had in mind when you decided to perform the assessment will dictate what you do with the results.

At times, the results are so shocking that the sponsor abandons a current course of action and chooses to move in an entirely different direction.

Other times, the results verify what the sponsor expected and assists in building a business case for moving in the direction envisioned.

In all cases, the assessment will help you to be sure that the decisions you are making will fit into the overall environment that you are dealing with. ♦

Updated 08/07/09
The Global Revenue Assurance Professional Association (GRAPA) is a not-for-profit organization created to serve the interests of revenue assurance professionals throughout the world. As the leading standards, certification and professionalizing body in revenue assurance, GRAPA is committed to core principals of consensus, rationalization and integrity in all its endeavors. GRAPA’s goal is to further the professional stature of those working in revenue assurance, and to have their essential functions recognized at the core of efficient and effective telecommunications industry practice. GRAPA believes that this can only be achieved through the rigorous application of ratified global standards, the certification of trained and qualified professionals, and the continuous education of those who work in such an essential, demanding and constantly evolving discipline.

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