



BRAZILIAN COURT OF AUDIT

# Performance Audit Manual



Federative Republic of Brazil

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Brazilian Court of Audit

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**BRAZILIAN COURT OF AUDIT**

# **Performance Audit Manual**

Brasília, 2010

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This is the third version of the manual, first published in 1998 and revised in 2000. It differs from the previous ones because it covers the entire cycle of this type of audit. Thus, in addition to updating chapters devoted to planning, implementation and elaboration of the report, guidelines were included on the choice of the subject to be audited and the monitoring of the deliberations arising from the assessment of audit reports. Quality control was also the subject of a specific chapter.

The document reflects the evolution of methods and techniques employed by TCU as it gained experience in carrying out performance audits. The best international experiences on the subject were considered in the preparation of this manual, as well as contributions from professionals in this Court. The manual is aligned with the auditing standards adopted by the International Organization of Supreme Audit Institutions - INTOSAI.

### OBJECTIVE

The purpose of this document is to define principles and standards that guide the implementation and quality control of performance audits under the responsibility of technical units of the Court.

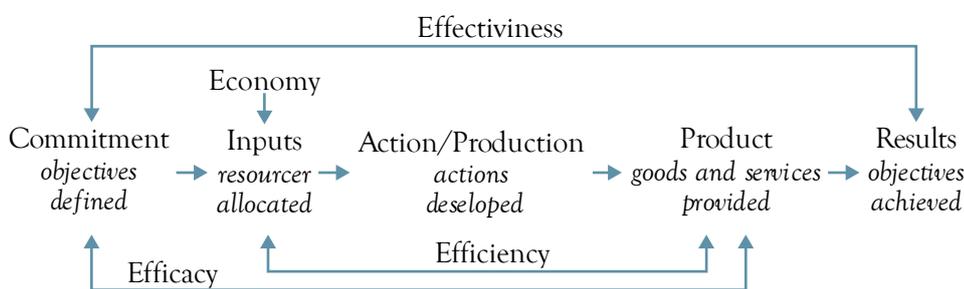


# PERFORMANCE DIMENSIONS

## CHARACTERISTICS OF PERFORMANCE AUDIT

1 Performance Auditing – ANOP<sup>1</sup> is the independent and objective examination of economy, efficiency, efficacy and effectiveness of organizations, government programs and activities, aiming at promoting improvement of public management.<sup>2</sup>

2 Performance audits may examine in the same work one or more of the major dimensions of analysis. The input-output diagram illustrates these dimensions and their interrelationships:



**Figure 1**  
Input-output diagram

Source: Adapted from ISSAI 3000/1.4, 2004.

### Economy

3 Economy is the minimization of costs of resources used in performing an activity, without compromising quality standards (ISSAI 3000/1.5, 2004).<sup>3</sup> It refers to the ability of an institution to properly manage the financial resources available to it.

4 Examination of the economy may include verification of management practices, management systems, benchmarking of procurement processes and other procedures pertaining to the performance audit, while the strict examination of the legality of bidding procedures, genuineness of documents, effectiveness of internal controls and other aspects should be the object of a compliance audit. In practice, there may be some overlap between compliance audit and performance audit. In such cases, the classification of a particular audit will depend on the primary objective of the audit (ISSAI 100/41, 2001).

<sup>1</sup> This manual uses the term ANOp as a synonym for performance auditing.

<sup>2</sup> The definition of performance auditing used in this manual is based on the Intosai Guidelines for performance auditing - Implementation Guidelines for Performance Auditing (ISSAI 3000 / 1, 2004).

<sup>3</sup> References to documents of Intosai follow the guidelines of that organization and not the ABNT standards.

## Efficiency

5 Efficiency is defined as the relation between products (goods and services)<sup>4</sup> generated by an activity and the costs of inputs used to produce them in a certain period of time, maintaining the quality patterns. This dimension refers to the effort of the process to transform inputs into outputs. It can be examined from two perspectives: minimizing the total cost or the means required to obtain the same quantity and quality of the output, or optimizing the combination of inputs to maximize the output when the total expense is determined in advance (COHEN; FRANCO, 1993). In this case, the analysis of the time required for execution of tasks is a variable to be considered.<sup>5</sup> Efficiency can be measured by calculating and comparing the unit cost of producing a good or service. Therefore, we can consider that the concept of efficiency is related to the economy.

## Efficacy

6 Efficacy is defined as the degree of achievement of scheduled goals (goods and services) in a given period of time, regardless of the costs involved (COHEN, FRANCO, 1993). The concept of efficacy concerns the ability of management to achieve immediate goals, translated into production targets or service, i.e. the ability to provide goods or services in accordance with the planning of actions.

7 It is important to note that the analysis of efficacy should consider the criteria adopted for setting the goal to be achieved. An underestimated goal can lead to erroneous conclusions about the efficacy of the program or activity under review. In addition, external factors such as budget constraints may compromise the achievement of goals and should be taken into account during the analysis of efficacy.

## Effectiveness

8 Effectiveness concerns the extent of achievement of the desired results, at a medium and long term. It refers to the relation between the results of an intervention or program in terms of its effects on the target population (observed impacts), and the desired goals (expected impacts), translated by the end objectives of the intervention. It means verifying if the occurrence of changes in the target population that could be reasonably attributed to the actions of the evaluated program (COHEN, FRANCO, 1993).

9 Therefore, when examining the effectiveness of a government intervention, the intent is to go beyond compliance with specific and immediate goals, usually embodied in production targets or service (examination of the effectiveness of management). It concerns ascertaining whether the results observed were actually caused by the actions taken and not by other factors (ISSAI 3000/1.5, 2004). Assessment of effectiveness presumes that goods and/or services were offered as planned. Examination of the effectiveness or impact assessment requires specific methodological treatment that seeks to establish a cause and effect relation between the variables of the program and the effects observed, comparing them with an estimate of what would happen if the program did not exist (ISSAI 3000/1.7, 2004).

## Other performance dimensions

10 Besides the four performance dimensions examined, others related to them may be explained due to their relevance in determining the scope of performance audits. Aspects such as quality of services, the degree to which program results cater to the needs of the clientele (generation of public value), equity in distribution of goods and services, can be dealt with in performance audits in order to subsidize performance accountability of government action.

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<sup>4</sup> Products (goods and services offered) can be understood as immediate results.

<sup>5</sup> The main issue is whether the resources were applied to obtain optimal or satisfactory use, or if similar results, in terms of quality and time, could have been achieved with fewer resources (ISSAI 3000/1.5, 2004).

## Equity

11 Examination of equity, which can be derived from the dimension of the effectiveness of public policy, is based on the principle that recognizes the difference between individuals and the need for differential treatment. According to Rawls (apud COHEN, FRANCO, 1993, p. 25) “to provide genuine equality of opportunity society must cater more to those born with fewer skills and those born in socially disadvantaged areas.” Also according to Rawls (apud MEDEIROS, 1999), unequal treatment is fair when it benefits the most needy individual - fair inequality. To promote equity is to ensure that everyone can exercise their civil rights (freedom of expression, access to information, freedom to associate, to vote, gender equality), their political and social rights (health, education, housing, security).<sup>6</sup> Therefore, public policies of protection and social development play a key role in building equity.

12 The examination of equity may involve, for example, research of criteria for resource allocation vis-à-vis the spatial distribution and the socio-economic profile of target population; strategies adopted by the public administrator to adjust the supply of services or benefits to different needs of the audience; or examining the differential impact resulting from implementation of public policy.<sup>7</sup>

### Characteristics of performance audit

13 Performance audits have characteristics that distinguish them from traditional audits. Unlike compliance audits<sup>8</sup>, which adopt relatively fixed patterns, performance audits, due to the variety and complexity of the issues handled, have greater

flexibility in the choice of subjects, objects of auditing, work methods and how to communicate audit findings. They employ a broad selection of evaluation methods and research in different fields of knowledge, especially of social sciences (ISSAI 3000/1.2, 2.2, 2004; ISSAI 400 / 4.21, 2001). Moreover, this type of audit requires from the auditor flexibility, imagination and analytical ability (ISSAI 3000/1.8, 2004).

14 Some areas of study, due to their specificity, require expertise and differentiated approach, as is the case of program evaluations, audits of information technology and environment (ISSAI 3000/1.7, Appendices 5 and 6, 2004).

15 In compliance audits, the findings take the form of concise opinion and standardized format based on financial statements and compliance of transactions with laws and regulations, or on topics such as the inadequacy of internal controls, fraud or illegal acts. In performance audits, the report deals with the economy and efficiency in the acquisition and application of resources, as well as efficiency and effectiveness of outcomes. These reports can vary considerably in scope and nature, stating, for example, the efficient application of resources, the impact of policies and programs and recommending changes designed to improve management (ISSAI 400/2-3, 2001).

16 Due to their nature, performance audits are more open to interpretations and judgments and their reports are therefore more analytical and argumentative (ISSAI 3000/1.2, 2004). While in compliance audits the examination of materiality is directly related to the amount of funds involved, in

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<sup>6</sup> According to the Federal Constitution (Article 3, section III), a fundamental objective of the Federative Republic of Brazil is to eradicate poverty and marginalization and reduce social and regional inequalities. With regard to the economic order, the Constitution establishes that it is based on the value of human work and free enterprise which aims to ensure everyone a life with dignity, according to the dictates of Social Justice adopting, among other principles, reduction of regional and social inequalities (art. 170).

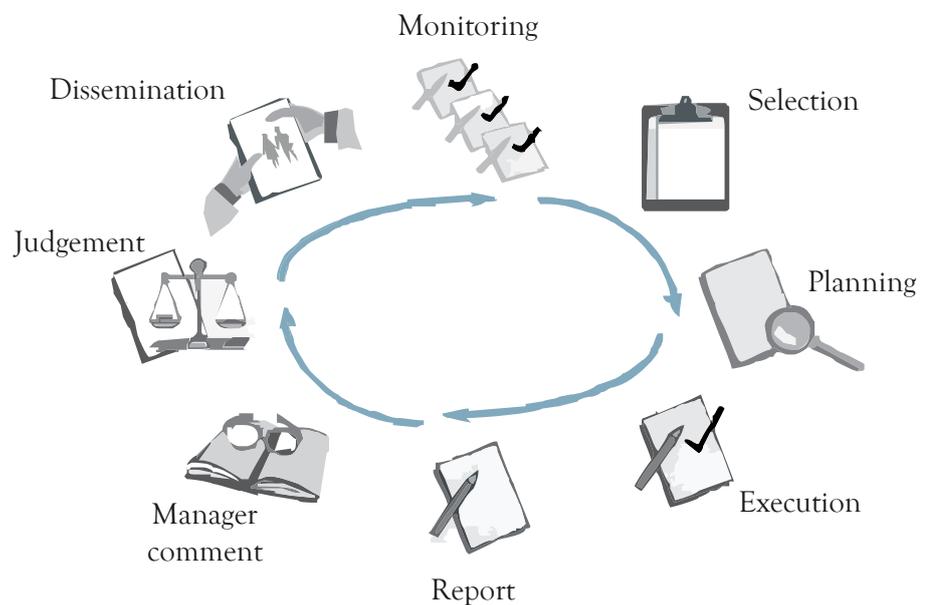
<sup>7</sup> An example of this type of analysis would be to check the incidence rates of a certain disease after an eradication campaign, according to regional or socioeconomic profiles of the population, to identify possible distortions that might have resulted from the manner of implementing the policy.

<sup>8</sup> According to Intosai, regularity audit includes financial audit, audit of internal controls and audit of legality of the administrative acts (ISSAI 100 / 39, 2001).

performance audits this is a more subjective matter and can be based on considerations about the nature or context of the audited object (ISSAI 400/29, 2001).

17 The involvement of the manager and his team is critical at various stages of the ANOP cycle (Figure 2). From the stage of selection of the issue and definition of the scope of the audit up to the characterization of the findings and possible recommendations, the team must count on the necessary cooperation of the audited body. For the audit to effectively contribute to improving management, managers need to support the work and be willing to collaborate, facilitating the identification of the relevant areas to be examined. In turn, the involvement of the manager favors the ownership of audit results and effective implementation of the recommendations proposed (ISSAI 3000/Appendix 4, 2004).

**Figure 2**  
Cycle of  
Performance Auditing



Fonte: Adaptado de NAO, 1996.

18 Briefly, the performance audit cycle begins with the selection process of subjects. After defining the specific topic, there is the planning stage to design the audit project, which aims at detailing the work objectives, the issues to be investigated, the procedures to be developed and the results expected with the completion of the audit. In the implementation phase, collection and analysis of information that will support the report to communicate the findings and conclusions of the audit is carried out. The monitoring stage is intended to monitor the actions taken by the auditee in response to the recommendations and determinations made by TCU, as well as to assess the benefit of its implementation (ISSAI 3000/3.1, 2004, TCU, 2005).

### Audit objects selection process

19 The selection process of the audited object is the first stage of the audit cycle. Its importance lies in the definition of an object that offers the opportunity to perform an audit which contributes to the improvement of public administration and gives society an independent opinion on the performance of public activity.

20 The selection process is necessary because the field of action of external control is very broad when compared to its resources, which are limited. To decide what to audit, it is necessary to establish criteria in order to guide the investment of resources and increase the likelihood of selecting audit objects that present opportunities to perform meaningful work (200/1.21 ISSAI 2001). This chapter addresses these criteria and tools that can support the selection process.

21 In determining the allocation of its resources, the Court shall prioritize activities that, under the law, need, to be completed within a certain deadline (ISSAI 200/1.22, 2001), such as the *a priori* reports and opinions on the accounts of the Government of the Republic. This chapter does not deal with these cases; instead, we deal with the care that should be taken to prioritize audits carried out by initiative of the TCU itself.

### Integration with strategic planning

22 The selection process must be integrated simultaneously into strategic planning and the annual planning system (ISSAI 3000/3.2, 2004, BRAZIL, 2005, art. 2).

23 The reason for integrating selection with strategic planning lies in the fact that the selection process is guided by fundamental choices that define the allocation of resources and guidelines for action. The definition of priorities, consistent with

the maintenance of the quality of control activities, includes making strategic decisions in light of the information available (ISSAI 200/1.23, 2001).

24 Strategic choices by the oversight agency cover different perspectives, from decisions about the allocation of resources to meet their legal obligations to decisions about areas of government that should be examined first.

25 Thus, strategic choices affect the allocation of resources in general, such as the nature of investment in capacity building, the types of work tools to be developed, the amount of staff allocated by line of business. Moreover, the selection of specific objects should be based on a national overview on the part of the oversight agency about priority audit issues (ISSAI 300/3.2, 2001).

26 Once the major fields of action are defined, taking into account the objectives of the oversight agency, the process for selecting objects of audit can be more focused, leading to the scrutiny of the sector information of government actions against selection criteria. This second phase will allow going from strategic planning to the formulation of an operational plan.

### Selection criteria

27 Once the strategies are selected, the next step of the selection process of the audit objects is defining the criteria that will be used to select specific objects to audit.

28 The main selection criterion is the ability of the audit to add value by contributing to the evaluation and improvement of public management (ISSAI 3000/3.2, 2004). Other criteria can be used, among which we highlight those listed in the Intosai and TCU norms: materiality, relevance and vulnerability (ISSAI 3000/3.2, 2004, BRAZIL,

2005). These criteria are strongly related, but are shown separately to facilitate understanding of how to operate the screening process.

29 The selection criteria may have more or less weight in the selection process, according to the situation. The characteristics of the possible audit object must be examined in relation to each of these criteria to, together, allow the development of prioritization. The processing of different information about adding value, materiality, relevance and vulnerability can be done in different ways. The details of how to process the information may be the object of roadmap with specific instructions.

30 It is important clarify that any of the possible options involves choices by the oversight agency. Thus, the selection of audit objects reflects preferences of those who operate the selection process. However, the choices made should be grounded, even if they are the opinion of a qualified group of professionals.

### **Value added**

31 Adding value refers to producing new knowledge and perspectives on the audit object (ISSAI 3000/3.2, 2004). The following situations may indicate the possibility of the audit adding significant value:

- a) discussion of a new public policy or of significant changes in the implementation of a program or in the organization of a government body;
- b) occurrence of new or urgent activities or changes of condition;
- c) lack of previous audits or works of other research or control bodies about the audit object;
- d) lack of knowledge about cause and effect relation between government action and solving problems.

### **Materiality**

32 The materiality criterion indicates that the screening process should take into consideration the values involved in the audit object, since the audit

should produce significant benefits. The benefits of performance audits are not always of a financial nature, but the improvement of audit processes regarding audit objects with high materiality has a great potential to generate savings or eliminate waste.

33 The amount of resources available in the budget is an indicator of materiality. However, in budget environments in which there is a great difference between the amount budgeted, contracted and paid, examination of values involved in each of these phases of expenditure may be needed. Moreover, when overseeing the area of regulation, the economic dimension of the sector in which the audit object is inserted must be taken into account.

### **Relevance**

34 The criterion of relevance indicates that selected audits should try to answer issues of interest to society, which are being debated publically and are valued.

35 The following approaches can be used to assess the possible relevance of the audit object:

- a) opinion of congressmen, technicians from legislative institutions or from research institutions, of prominent individuals from various sectors of the society;
- b) statements of priorities in the public plans and budgets such as the Multi-Year Plan, the Budget Guidelines Law, the message of the Executive which forwards the budget to the Legislative, the sector plans, public manifestations of prioritization by the government;
- c) repeated reports of waste, errors, disobedience to procedures;
- d) presence in the media.

### **Vulnerability**

36 Within the selection process, vulnerabilities are situations or intrinsic properties of the audit object that may be associated with adverse events (ABNT, 2009). According to the nature of the audit object

that is being selected, it is necessary to investigate specific areas relating to the operation of government programs, public organizations or municipalities to be audited. In the latter case characteristics related to local institutional development can be examined.

#### **Examples of situations that may be associated with adverse events**

- Complex management structures that involve different government organizations, from a single sphere or different governmental spheres, and non-governmental organizations.
- Lack of reliable or updated information on the performance of the audit object, such as achieving goals, product costs, public catered to.
- Structure, planning, control issues.
- Lack of clarity about goals, responsibilities, decision-making processes.
- Operational problems with computerized systems.

Source: ISSAI 3000/3.2, 2004.

### **Pre-study**

37 To move from strategic planning to the operational plan updated information is needed about the structure, functions and operation of possible audit objects, allowing the identification of areas with high materiality, that present vulnerabilities and that have potential in order for the audit to contribute to generating improvements in the administration (ISSAI 200/1.23, 2001). Collecting this information can be accomplished by means of a pre-study, which is a type of oversight instrument (BRAZIL, 2002a, art. 238).

38 Strategic planning, to which the selection process is linked, may be based on analysis or identification of risks, or, on a less theoretical scale, on the analysis of indicators of existing or potential problems (ISSAI 3000/3.2, 2004). Therefore, identification or analysis of risks can play an important role in defining the scope of the pre-study and in obtaining information that will retro feed strategic planning.

39 The pre-study can serve both as a tool to select topics for future audit subjects and to consider the feasibility of specific audits. Depending on the purpose and on the knowledge accumulated regarding the area being examined, the pre-study may have a broad or narrow scope.

## Pre-study (broad scope)

40 The broad scope pre-study aims to understand the organization and functioning of the areas that could be audited as well as to identify objects and instruments of oversight (BRAZIL, 2002a, Art. 238, I and II).

41 The pre-study of broad scope explores the audit possibilities by means of an examination that goes from general to specific and from a multi-annual perspective. Given its magnitude, it can identify opportunities to carry out both performance and compliance audits.

42 In general, information is collected on the sector plans, the legal basis of programs and organizations, budget forecasting and financial implementation, information systems, monitoring and evaluation structures, goals, program plans, and organizations as well as on reviews of the work of research and control bodies regarding the possible objects of the audit.

43 The pre-study is an opportunity to acquire systemic knowledge about sectors of government activity. One seeks to understand the relationship between government programs to achieve the goals of a specific public policy, the role of public and private organizations involved, the main challenges and difficulties.

44 In addition, the pre-study allows to actively update information about areas of government, to identify new developments and trends in public policies, changes in priorities, the need to use new approaches and techniques in auditing.

45 Through the pre-study, the Court equips itself to better focus its oversight actions and can create an action strategy with a multi-annual perspective which consistently addresses the main problems identified. The pre-study of broad scope, by its nature, has a cost that is greater than the cost of a limited scope pre-study. However it does not need to be performed frequently because part of the information is stable and another part can be updated by consulting the databases or through other methods available.

## Pre-study (limited scope)

46 In some cases it may be necessary to carry out a more in-depth pre-study to analyze the feasibility of the audit, i.e., examine whether the audit object indicated is auditable, which corresponds to one of the possible objectives of the pre-study (BRAZIL, 2002a, art. 238, section III).

47 One of the reasons that may require the completion of a feasibility analysis is the issue of opportunity. Since the pre-study of broad scope aims to identify audit objects in the short, medium and long terms, changing conditions may require the updating of information and reassessment of the criteria for selection. Another reason is that the information collected using a systemic approach may not be sufficient to decide on whether or not to carry out a specific audit which would require more detailed information.

48 In general, a feasibility analysis provides information on key operational processes and products so as to clarify how to carry out actions. In addition, they examine:

- a) the quality of performance indicators already identified, highlighting opportunities for improvement;
- b) the availability of data and information systems, addressing their reliability and comprehensiveness;
- c) the existing management reports and assessments previously made;
- d) any limitations to the performance of the audit,
- e) the willingness of managers to participate in the audit;
- f) the need to employ specialized skills in the audit;
- g) the possible damages to the objectives of external control, if the audit is not performed.

49 The completion of the feasibility analysis should be a substantive and convincing manifestation of values about the appropriateness and opportunity of performing the audit. It should include the reasons for recommending the selection of the audit object, the potential of the topic to call the attention of the media, of organized civil society and of the Legislative Branch, and produce results that add value.

50 After selecting the audit object, the next stage of the audit cycle is the planning of the specific audit.



51 According to the International Organization of Supreme Audit Institution - Intosai, the planning should be ensure that a high quality audit is conducted in an economic, efficient and timely fashion (ISSAI 3000/3.3, 2004).

52 Performance audits should be preceded by detailed planning that provides a clear sense of direction to the work, a consistent logical structure and that helps to control costs and meet deadlines (NAO, 1997).

### Objective of audit planning

Audit planning aims to define the objective and scope of the audit, set the methodological strategy to be adopted and estimate the resources, costs and time needed for its realization.

53 Planning consists of the following activities:

- a) preliminary analysis of the audit object;
- b) definition of the purpose and scope of the audit;
- c) specification of the audit criteria;
- d) preparation of the planning matrix;
- e) validation of the planning matrix;
- f) development of tools for data collection;
- g) pilot testing;
- h) preparation of the audit project.

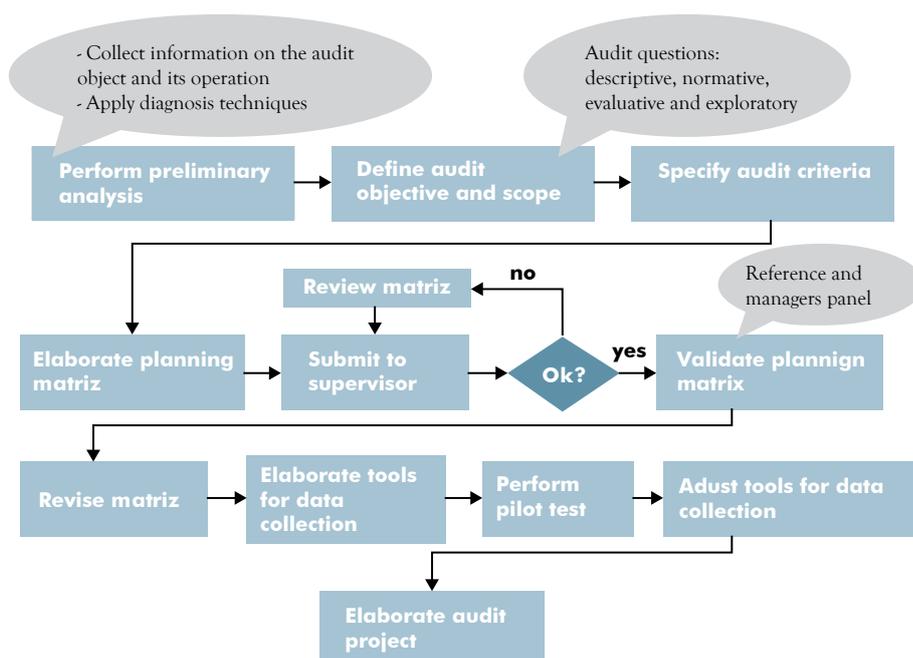


Figure 3  
Planning Activities

54 Considering that performance audits should be managed in the same way as projects, in the early planning stage, the team should develop a schedule containing the tasks to be performed, the individuals in charge and the final deadline for implementation. This tool allows the team to organize its activities, facilitating the allocation of its members in accordance with the tasks required and the time available. The schedule must be agreed upon among the team members and submitted to their supervisor, who will use it to monitor their work. To facilitate this task, software can also be used for monitoring specific projects.

55 It is up to the team coordinator to ensure that work is properly planned and that the other team members and managers of this audit object are sufficiently informed about the purpose of planning.

56 In order for the team to reach a common understanding about the work, it is important that all members follow its development and share the information gathered. Accordingly, short and regular meetings are recommended to keep everyone informed about the progress of the work and to look for solutions for bottlenecks or conflicts, when needed.

57 Staff must pass on to the supervisor, within agreed deadlines, information about the activities completed and their impact on the course of the audit, in view of the data obtained up to that point of the planning. The limitations or barriers to meeting deadlines and tasks agreed initially shall also be reported to the supervisor.

58 During the planning, it is important that the team coordinator assess the deadlines originally estimated. If any adjustment is needed, the team coordinator should submit a new schedule of activities to the supervisor. This proposal should be presented as soon as the need is identified, so that arrangements are made on time.

59 Establishing good relationships with managers from the beginning is paramount to the success of the audit. Special attention should be given to the careful organization of contacts with managers, starting in the planning phase (ISSAI 3000/Appendix 4, 2004). The initial contact must be by phone, followed by a meeting in which the audit team, accompanied by the supervisor, presents the objectives of the work to the manager and his team. Participation of representative of internal control should be requested.

60 The objective of this initial meeting, in addition to introducing the audit teams and the audited institution or program, is to explain the type of audit to be performed and its purpose, the main analytical dimensions (economy, efficiency, efficacy and effectiveness), the steps and deadlines for completion of work. It is essential to highlight the importance of manager collaboration and ensure his participation in all phases of work, emphasizing that a preliminary report will be forward to him/her for review and comment. The attitude of the audit team should foster mutual trust and productive interaction throughout the work, without, however, neglecting the limits needed to safeguard independence in conducting the audit (ISSAI 3000/4.4, 2004; ISSA 200 / 2.25/2.29, 2001.)

61 To avoid unnecessary conflicts, auditors should seek to understand the specific nature of the audit object. To do so, they should consider it from different perspectives and adopt an open and objective attitude in the face of differing opinions, trying to clarify them in order to build a final view as true and fair as possible (ISSAI 3000/4.4, 2004 ).

62 It is important to record, organize, document and reference the data and information obtained during all phases of the audit in the form of working papers (ISSAI 3000/4.2/Appendix 3, 2004; GAO, 2007).

63 Working papers are the relevant documents collected and generated during the audit. They should be sufficiently comprehensive and detailed to enable an experienced auditor, who had no previous contact with the audit, to understand the nature and results of the audit, the procedures adopted, evidences obtained and conclusions reached, based on the documentation.

64 The amount, type and content of documentation will be defined by the auditor. However, it is recommended to document:

- a) purpose, scope, schedule and methodology of work;
- b) planning and findings matrices;
- c) data collection instruments;
- d) results of diagnostic techniques applied;
- e) results of questionnaires, interviews and focus groups conducted;
- f) results of statistical analysis and database;
- g) suggestions obtained from the expert panels.

65 Keeping paperwork organized and documented is important because:

- a) it assists in planning, executing and supervising the audit;
- b) it supports writing of the report and helps to answer inquiries from the auditee or other stakeholders;
- c) it increases the effectiveness and efficiency of the audit;

- d) it assists in the review of audit quality;
- e) it contributes to the auditor's professional development;
- f) it can support the performance of new works.

66 The audit documentation should be stored as long as necessary to satisfy the legal and administrative requirements. One should ensure the security, integrity, accessibility and retrievability of information, whether in paper, electronic or other media.

### **Preliminary analysis of the audited object**

67 The preliminary analysis consists of identifying relevant information on the audited object to acquire the knowledge required for come up with the questions that will be examined by the audit.

68 The understanding of the audit object allows identification of the existing risks and critical points and is essential for defining the purpose and scope of the audit. It is important to ensure that the key aspects of the audited object have been investigated, documented and understood. The extent and the level of details that will be collected should take into account the nature of the object investigated, time and resources available to the team.

69 The team should conduct preliminary investigation of internal controls and information systems as well as of legal aspects that are considered significant in the context of the audit. In performance audits, examination of the reliability of the information base and of the internal controls should emphasize the aspects that may undermine the effectiveness and / or efficiency of operations.

70 Assessment of internal controls should be considered in estimating the audit risk, which covers the possibility of the auditor reaching wrong or incomplete conclusions. Where relevant, the outcome of this assessment must be recorded in the audit project.

71 Collection of information can be structured as follows (ISSAI 3000/3.3, 2004):

The object and its context:

- a) objectives (general or partial, depending on the extent of the work);
- b) operating strategy (developed actions, targets established, clients served, procedures and resources used, goods and services offered, and benefits provided);
- c) organizational structure (subordination and advisory lines of and relation to the activities developed);
- d) funding sources and major items of cost and expense (history of budget execution);
- e) status in the context of government priorities;
- f) history (as of the creation date, previous names and changes in its logical design in relation to objectives, target audience and ways of implementation);
- g) interest groups and characteristics of external and internal environment;
- h) the nature of operation of other government agencies or programs that operate in the same area (lines of coordination).

Operation of the audited object:

- a) management processes;
- b) existing databases;
- c) control environment;
- d) constraints faced (legal requirements and limitations imposed by competition, technology, the lack of resources or the need to cooperate with other entities).

72 Information on the audited object can be obtained from various sources, as exemplified in the Appendix.

73 The team should carry out a pre-study of relevant works on the audit object, identifying aspects evaluated and the main findings of the audit reports of TCU and internal control, in addition to studies and research initiative by the executing agency or reputable academic institution.

74 Still in the preliminary examination, techniques may be used in order to come up with a diagnosis based on a systematic interpretation of the information collected and on the identification of the main problems relating to the performance of the selected object. Table 1 summarizes the techniques to be employed and the goals established.

Diagnosis technique	Objective
SWOT and Risk Analysis	<ul style="list-style-type: none"> <li>Identify strengths and weaknesses of internal environment of the audit object and the opportunities and threats of external environment</li> <li>Identify possible areas to investigate.</li> <li>Identify risk factors and know the organizational capacity for its management.</li> </ul>
Stakeholder analysis	<ul style="list-style-type: none"> <li>Identify main groups of interest (stakeholders interested).</li> <li>Identify opinions and conflicts of interest and relevant information</li> </ul>
Map of products and Performance Indicators	<ul style="list-style-type: none"> <li>Know the main objectives of an entity or program.</li> <li>Represent dependence relationship among products</li> <li>Identify those responsible for critical products</li> <li>Develop performance indicators.</li> </ul>
Processes map	<ul style="list-style-type: none"> <li>Know the operation of the working process.</li> <li>Identify good practices.</li> <li>Identify opportunities for rationalization and improvement of working processes.</li> </ul>

**Table 1**  
Most used techniques in the planning stage

Observation: Other techniques, such as the Ishikawa Analysis, RECI Analysis and Logical Framework may also be useful in that stage of the audit work.

75 Performance data are essential for evaluating the aspects of economy, efficiency, efficacy and effectiveness of the audit object. The use of performance indicators to measure the results achieved by the management is advocated by the doctrines of results-oriented management. The Ministry of Planning establishes that for each program it is mandatory to have at least one indicator. For programs that support public policies and special areas<sup>9</sup>, indicators are optional (BRAZIL, 2008). Although it occupies a central position in planning the audit, the production of performance information by the manager may face the following problems:

- a) difficulty developing performance indicators based on inaccurately defined objectives;
- b) inadequate or unreliable information systems;
- c) the effect of external factors on the performance of programs, making it difficult to identify outcomes directly attributable to specific policies and actions;
- d) difficulty in measuring non-homogeneous products;
- e) difficulty incorporating the qualitative dimension of performance indicators;
- f) the need for multiple indicators to obtain a picture of efficiency and effectiveness of a program.

<sup>9</sup> These are programs focused on the typical Government services, on planning, on sector policy-making, on coordination, evaluation or on control of end programs, resulting in goods or services offered to the State itself. They may even be made up of costs that are typically administrative in nature (BRAZIL, 2008).

76 Due to the difficulties pointed out, when examining performance information, the team must consider, among other issues:

- a) Are the performance indicators valid, reliable and justifiable in light of cost-benefit?
- b) Are the procedures for collecting performance data sufficient and adequate?
- c) Are the performance indicators an integral part of the process of decision making?

77 Whenever there is a need to expand knowledge about the operational aspects of the audit object, exploratory visits are recommended, i.e., the displacement of the audit team to the location (or locations) where the activities are developed with the objective of collecting some preliminary information. Absence of a clear legal framework, insufficient information or even diversity in the form of implementation of actions, are examples of reasons for the exploratory visit during the planning phase. The costs of its implementation should be considered in the estimated cost of the audit.

78 The exploratory visit is helpful to prevent problems during the execution of the work, reduce uncertainties, to help define the audit criteria, and allow obtaining of information that will subsidize the development of instruments for data collection.

### **Definition of the audit objective and scope**

79 From the knowledge built during the preliminary analysis of the audit object, the team must define the objective of the audit through the specification of the problem and audit issues to be investigated. The objective should also explain the reasons that led the team to suggest a specific theme and focus, if they have not been previously defined in the resolution that established the audit.

#### **Audit questions**

The audit question is the key element in determining the direction of the audit work, the methods and techniques to adopt and results to be achieved.

80 When formulating the questions and, when necessary, the audit sub-questions, the team is at the same time, clearly establishing the focus of their research, the dimensions and the limits that must be observed during the execution of the works.

81 Accordingly, the proper formulation of questions is critical to the success of the audit, since it will have implications for decisions regarding the types of data to be collected, how collection will be carried out, the analysis that will be performed and the conclusions that will be reached.

82 In developing the audit questions, the following aspects should be taken into account:

- a) clarity and specificity;
- b) use of terms that can be defined and measured;
- c) investigative feasibility (possibility to be answered);
- d) articulation and coherence (the set of questions should be capable of clarifying the audit issue previously identified).

### **Types of audit questions**

83 The type of question asked will have a direct relation to the nature of the answer and the methodology to be adopted. We can classify audit questions into four types (GAO, 1991, NAO 1997):

- a) Descriptive questions: They are formulated to provide detailed information on topics such as conditions for the implementation or operation of a particular program or activity, changes occurred, problems and areas with a potential for improvement. These are questions that seek to elaborate on aspects preliminary dealt with during the planning stage. Example of descriptive question: “How are local executing officers putting into operation the access requirements established by the program?”
- b) Normative questions: Questions that deal with comparisons between the current situation and the one established in a norm, standard or goal, both qualitative and quantitative. The methodological approach applied to these cases is the comparison with previously identified criteria and the performance observed. They cover what should be and usually are questions like: “Has the program been reaching the goals set forth?”, “Do the installed systems meet the specifications of the program?”
- c) Evaluative questions (or of impact, or cause and effect): The evaluative questions relate to the effectiveness of the objective of the auditing and go beyond the descriptive and normative issues to focus on what would have happened if the program or activity had not been executed. In other words, an evaluative question wants to know what difference government intervention made in solving the problem identified. The scope of the question also covers the unexpected effects, positive or negative, caused by the program. Example of an evaluative question: “To what extent can the effects observed be attributed to the program?” Evaluative questions almost always require rather complex methodological strategies, involving experimental models with control groups, sophisticated statistical analysis and modeling. Such studies can yield revealing results but, depending on the complexity involved, they are expensive and their implementation is time consuming.
- d) Exploratory questions: Designed to explain specific events, to clarify detours from standard performance or the reasons why a particular outcome was achieved. These are questions like: “What are the main factors that account for the crisis in the air transport system?” “What factors explain

the significant increase in spending on payment of sick leave benefits during the last decade?”

84 The formulation of the audit question is an interactive process which basically depends on the information gathered during the planning phase and on what you intend to investigate. Usually the brainstorming technique is used in this process which allows each participant to freely expose his/her thoughts and interpretations. This is done until they reach a common understanding on the formulation of the problem, of the audit questions and sub-questions.

85 Although there is no easy method to arrive at audit questions, it is recommended that a structured approach be adopted to formulate them, inspired by the Cartesian method of solving problems, as described below:

#### **Step 1 – Describe the “problem”:**

86 Based on the information afforded by the preliminary analysis of the auditing object, clearly and objectively express what has motivated the audit. The problem description should be enough to guide the design of the audit.

87 If the request for the audit is formulated in a generic or very comprehensive way, planning should define the scope of the audit, an important step to allow a clear understanding of what will be audited. The explanation of the non-scope, i.e., of what will not be addressed by the audit may be necessary to establish the precise limits of the work.

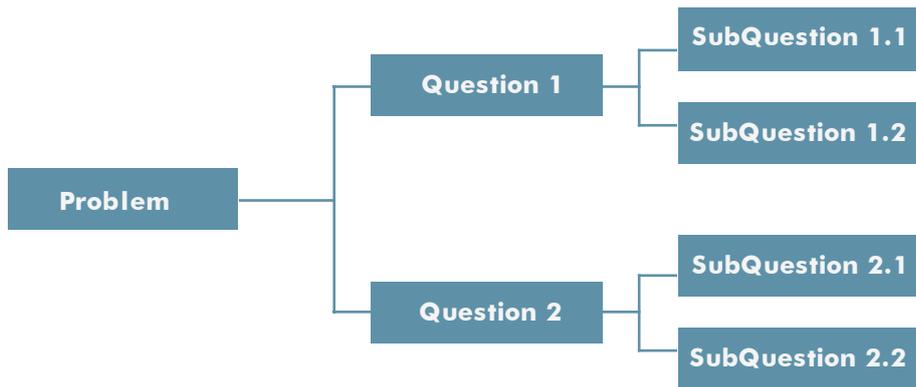
#### **Example of formulation of audit problem**

As from 2000, government spending with sick leave benefit had a significant increase. Therefore, to ensure the provision of quality services and curb waste of public resources, it is important to investigate the adequacy of the control instruments of the Social Security Department to manage granting and maintenance of this benefit. It is also important to assess the contribution of vocational rehabilitation services of beneficiaries in order to reduce costs.

Source: Adapted from the performance audit report on the sick leave benefit (TC 012.034/2008-7).

#### **Step 2 - Formulate possible questions:**

88 The problem must be subdivided into parts that do not overlap. Through brainstorming, identify possible questions that, once answered, may clarify the problem formulated. Next, establish a hierarchy of questions, as in Figure 4. Identify the type of question asked since the nature of the question will have a direct relation with the nature of the response and the methodology to be adopted.



**Figure 4**  
Hierarchy of questions  
and sub-questions

89 There are no strict rules about when to formulate audit sub-questions. However, questions should be focused, specific and deal with only one subject. If necessary, sub-questions must be formulated so that each one is as simple as possible and, together, cover what you want to investigate through the audit question. Sub-questions facilitate the organization of the audit project information by line of planning matrix, allowing the reader to follow the logic of the design of the audit. Excess of sub-questions can make the matrix extensive, repetitive and tiresome. Thus, the most appropriate solution for each job should be adopted.

#### **Example of formulation of audit questions and sub-questions**

Question 1: Are sick leave internal controls adequate to ensure the payment of such benefits with reasonable security?

Sub-question 1.1: Are internal controls over concession of payment of sick leave benefits adequate to ensure, with reasonable security, the payment of such benefits?

Sub-question 1.2: Are the internal controls over the maintenance activities of the sick leave benefits adequate to ensure, with reasonable security, payment of these benefits?

Question 2: What is the coverage of the service of vocational rehabilitation and what is its economic impact on the benefit expenditures?

Sub-question 2.1: Are the facilities of the service and the number of employees allocated sufficient to meet the demand for vocational rehabilitation?

Sub-question 2.2: What is the level of economy that the rehabilitation service provides and what is its growth potential?

Source: Adapted from the performance audit report on the sick leave benefit (TC 012.034/2008-7).

### Step 3 - Test the questions:

90 Identify the issues that are difficult to answer and consider how the difficulties can be circumvented. Confront the questions with the resources available to carry out the audit, defined in terms of cost, implementation deadlines and staff. Consider also the skills of the team vis-à-vis the measures required to implement the audit project.

### Step 4 - Eliminate non-essential questions:

91 Eliminate questions devoid of potential to improve performance or that have no viable solution. Therefore, the criteria for the selection or exclusion of any particular question is the relevance of the conclusions that can be achieved and the feasibility of strategic methodology required to answer it satisfactorily. Prioritize the issues and decide which should be studied. Remember that the questions must be concise and unambiguous.

92 After defining the problem and the audit questions, the team should specify the criteria for audit and prepare the planning matrix.

### Specification of the audit criteria

93 While still in the planning phase, the team should define the audit criteria, which are performance standards used to measure economy, efficiency, efficacy and effectiveness of the audit object. They represent the ideal or desirable states of what is being examined and provide the context for evaluating the evidence and understanding the findings, conclusions and recommendations of the audit. The audit findings are generated based on the comparison between the criterion and the existing situation (condition). Therefore, discretion is the reasoned and reasonable expectation of what “should be”, the best practices and benchmarks against which performance is compared or evaluated<sup>10</sup> (ISSAI 3000/Appendix 2, 2004, GAO, 2007).

94 Audit criteria play a fundamental role in the development of various aspects of work, providing the basis for (ISSAI 3000/Appendix 2, 2004):

- a) definition of basic conceptual framework that can make communication between the audit team members, officials and managers of the TCU easier;
- b) definition of the scope of the audit, making its objectives explicit;
- c) orientation of data collection, indicating how to obtain significant evidence;
- d) setting of parameters of the conclusions and recommendations of the audit.

95 In performance audits, the choice of the audit criterion is more flexible and often contains elements of discretion and professional judging. Depending on the case examined, the most appropriate source for the audit criteria will either be the official standard expressed in laws and regulations or scientific rationale, having as reference specialized literature, professional standards and best practices. Among the sources that can be employed to define the audit criteria are (ISSAI 3000/3.3, 2004; GAO, 2007) the following:

- a) laws and regulations governing the operation of the audited entity;
- b) decisions taken by the Legislative or Executive Branch;
- c) references to historical comparisons and comparisons with best practice;
- d) standards and professional values,
- e) key performance indicators established by the audited entity or the by the Administration;
- f) independent expert opinion;
- g) the criteria used in similar audits or used by other Supreme Audit Institutions - SAI;
- h) organizations conducting similar activities or that have similar programs;
- i) specialized literature.

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<sup>10</sup> It is important to note that satisfactory performance does not mean perfect performance and that any trial should take into account the circumstances of the audited body (ISSAI 3000, appendix 2).

96 Criteria can be more easily defined when the objectives established by the legislator or the Executive Branch are clear, accurate and relevant. When they are vague or conflicting, the audit team should interpret them or reword them, making them more operational and measurable. In this case, two alternate approaches can be employed. The first is to consult specialists on how objectives and goals should be interpreted and measured; which should be the expected results under given conditions, or yet which is the most comparable acknowledged practice. The second alternative is to consult managers and relevant stakeholders to define and agree on well-grounded and realistic criteria.<sup>11</sup>

97 By setting audit criteria, the audit team should ensure they are reasonable, feasible and relevant for the audit objectives. The definition of appropriate criteria should meet also the following characteristics (ISSAI 3000/Appendix 2, 2004):

- a) Reliability: they should result in consistent conclusions when applied by another auditor under the same condition;
- b) Objectivity: they must be free of any bias by the auditor or management;
- c) Utility: they should result in findings and conclusions that satisfy the information needs of stakeholders;
- d) Clarity: they must be clearly stated and not subject to significantly different interpretations;
- e) Comparability: they should be consistent with criteria used to audit similar programs or activities and with criteria used previously to audit the same object of audit;
- f) Completeness: they must incorporate the dimensions that are relevant to assess performance;
- g) Acceptability: they must have the acceptance of independent experts, audited agencies or entities, the Legislative, the media and the general public.

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<sup>11</sup> It is always advisable to have the views of managers about the audit criteria to be adopted, so that any disagreements can be discussed and clarified at the outset of the audit. However, the facts and arguments presented by the managers should be compared with other relevant sources (ISSAI 3000, Appendix 2)

## Elaboration of the planning matrix

98 Having defined the audit problem and questions, the team should prepare a planning matrix. This includes a table summarizing the relevant information in planning an audit. Table 2 presents the model of the planning matrix used in performance audits.

**Table 2**  
Model of the  
planning matrix

**Problem:** Clearly and objectively express what prompted the audit.

Audit question / sub question	Required information	Sources of information	Data collection procedures	Data analysis procedures	Limitations	What the analysis will allow us to say
Specify key-terms and the scope of the question: - criterion - period of coverage - stakeholders involved - geographic coverage	Identify the information required to answer to the audit question	Identify the sources of each item of information	Identify the data collection techniques that will be used and describe the respective procedures	Identify the techniques to be used in the data analysis and describe the respective procedures	Specify the limitations regarding: - the methodological strategy adopted - access to people and information - the quality of information - the operating conditions to perform the work	Clarify precisely which conclusions or results may be achieved

99 The purpose of the planning matrix is to assist the conceptual elaboration of the work and guide the team in the implementation phase. It is an auditing tool that makes planning more systematic and directed, facilitating communication of decisions on methodology and assisting with conducting field work. The planning matrix is a flexible instrument and its contents can be updated or modified by the team as the audit work progresses.

100 The matrix is also the main tool to support the preparation of the audit project, since it contains the essential information that defines it. That is why it is important to have a mature discussion of the matrix before starting to draft the audit project. The Appendix details each of the elements that compose the planning matrix.

## Validation of the planning matrix

101 The validation process of the planning matrix involves two steps. First, after the review by the supervisor, the planning matrix must be submitted to an expert panel in order to gather comments and suggestions for its improvement. This validation process has the following objectives:

- a) to check the logic and thoroughness of the audit methodology used, questioning the sources of information, the methodological strategy and method of analysis to be used in comparison with the objectives of the audit;
- b) to guide and advise the audit team on the approach to be adopted by the audit;
- c) to provide a diverse set of independent and expert opinions on the audit project;
- d) to ensure the quality of work and alert the team about failures in their development / design, and
- e) to check the existence of significant potential benefits.

102 Therefore, the composition of the panel to be organized by the audit team should encourage debate and reflect different viewpoints on the subject of audit. The panel may have the participation of invited experts from universities, research centers and technical consultations from the Congress interested in the topic, as well as representatives of internal control, planning and budgeting government departments; representatives from the Minister-Rapporteur; auditors with acknowledged expertise in the subject and representatives of non-profit organizations, when appropriate. The manager may participate in the expert panel whenever the team and the supervisors understand that their presence will not prejudice the proposed objectives in the panel.

103 Another role played by the expert panel, not less important, is the strengthening of social control by enabling relevant stakeholders to participate in the discussion of the audit project and to be informed about the nature of the review by TCU, generating expectations about the results of the work and strengthening the institutional image.

104 The second stage of the validation process is the submission of the planning matrix to the managers of the agency or program being audited, after the necessary adjustments are made based on the outcome of discussions within the expert panel. The aim of this procedure is to present the outcome of the planning stage, carried out with the participation of the manager, to obtain his/her commitment to the objective and the performance of the audit.

## **Elaboration of tools to collect data and pilot test**

105 Once the planning matrix had been defined and validated, the tools for data collection that will be used during the audit shall be elaborated. Each technique for data collection - interviews, questionnaires, focus groups and direct observation - has its own instrument which should be designed to ensure the obtainment of relevant and sufficient information to answer audit questions.

106 The entire team should be involved in the elaboration of instruments to collect data, which must be tested to ensure their consistency. The pilot test can also check the initial assumptions regarding the operation of the audited object and the quality and reliability of the data.

107 To obtain a representative picture, when performing the pilot test the team should select a place or aspect of the audit object that poses potential difficulties for conducting the work, thus allowing the team to anticipate problems that they might face. Moreover, data collected will adjust the sample size and ensure that the methodological strategy selected shall provide a conclusive answer to the audit question.

108 Therefore, conducting a pilot test is strongly recommended in case of audits of great complexity, in areas of difficult access and high costs, since it increases the chances that the work developed will reach the desired level of quality at the lowest possible cost.

## **Elaboration of the audit project**

109 At the end of the planning stage, the team should prepare the audit project that summarizes the nature of the work to be carried out and results to be achieved. The project shall explain the motivation to investigate a certain problem of auditing, according to the specific focus and the use of a certain methodology.

110 Therefore, the project will contain a brief description of the object of audit, objectives of the work, questions to be investigated, procedures to be developed and results expected with the audit. The following will be part of the appendix: a planning matrix that summarizes the central information of the audit project, the proposed work schedule and estimated costs, including hiring of a specialist, when appropriate.

111 It is essential to highlight the results to be achieved with the audit, indicating opportunities for improvement and, where possible, the savings of public resources, to enable the analysis of the audit's cost-benefit.

112 It is up to the team coordinator to ensure that the audit project contains all the information necessary for the correct and timely assessment of the proposed work.

113 The execution phase consists in obtaining the appropriate and sufficient evidences to support the findings and conclusions of the audit.

114 The main activities conducted during execution are:

- a) development of field work;
- b) analysis of collected data;
- c) elaboration of the findings matrix;
- d) validation of the findings matrix.

115 In general, collection and analysis of data are not closed activities. Except in researches, data are collected, interpreted and analyzed simultaneously. Depending on the methodology adopted in the audit project, there may be significant variation in the organization of field work and data analysis strategy.

### **Audit findings**

116 A finding is the discrepancy between the existing situation and the criterion. Findings are situations verified by the auditor during the field work that will be used to answer audit questions. The findings have the following attributes: criterion (what should be), condition (what is), cause (reason for detour from deviation from the criterion) and effect (a consequence of the situation found). The audit finding occurs when the criterion is compared to the existing situation. (ISSAI 3000/4.3, 2004).

117 Audit criterion is the performance standard used to measure economy, efficiency, efficacy and effectiveness of the audit object. Its purpose is to determine whether the audited object reaches, exceeds or falls short of expected performance. It can be defined quantitatively or qualitatively. Meeting or exceeding the criteria may indicate the occurrence of good practice. Not reaching the criterion indicates opportunity for improvement of performance. It is important to note that satisfactory performance is not a perfect performance but the expected performance, considering the circumstances with which the audited institution works (ISSAI 3000/Appendix 2, 2004). Paragraphs 93-97 contain more information about audit criterion.

118 Condition is the existing situation, identified and documented during the audit. Cause is the reason for the difference between the condition and the criterion. The cause will be the basis for the proposed resolutions. Effect is the consequence of the difference found by the audit between condition and criterion. The effect indicates the seriousness of the situation encountered and determines the intensity of corrective action. (GAO, 2007).

### Example of audit finding

**Finding:** Lack of psychiatric inpatient beds in most Brazilian states.

**Criterion:** The number of psychiatric inpatient beds established by the World Health Organization is 0.43 per thousand inhabitants.

**Condition:** Brazil has an average of 0.37 psychiatric inpatient beds per thousand inhabitants.

**Causes:**

- Uneven distribution of beds between the federal states (the southeastern region has 0.53 beds per thousand inhabitants, while in the northern region the rate is 0.04)
- Distribution of beds does not meet the population criteria
- Lack of municipal and state mental health plans
- Incipient social control

**Effects:**

- Deficiency of service in places with low beds rates
- Migration of people with mental disorders among municipalities or among states, complicating the planning of health care.

119 It is not always required to identify all four attributes of the findings. In audits that have the objective to investigate a given problem and analyze its causes, the criteria are generally not defined *a priori* and sometimes it doesn't even make sense to do so (ISSAI 3000/4.3, 2004). This applies, for example, to the exploratory questions set out in paragraph 83 d.

120 Sometimes one cannot reliably identify the causes of the situation encountered because such identification would require investigations that would need a sophisticated methodology which would not be within the scope of the audit.

121 Once the audit finding is identified, two complementary forms of evaluation occur: evaluation of the relevance of the findings and evaluation of the causes of poor performance. Where performance is above expectation, causes must be investigated to identify good practices (ISSAI 3000/4.3, 2004).

122 The auditors should also evaluate the effects of the finding. When possible, those effects should be quantified. For example, the cost of inefficient processes or unproductive facilities can be estimated. Furthermore, inefficient processes or management can result in delays or waste of resources. Qualitative effects resulting from faulty management decisions or lack of quality control in delivering of public services can have significant impacts on beneficiaries. If the effect has already occurred, it is important to check that arrangements were made to prevent it from occurring again. If the effects are not easily identified the auditor should try to estimate them (ISSAI 3000/4.3, 2004).

## Evidences

1123 Evidence is information gathered during the audit and used to substantiate the findings. The set of findings will back the conclusions of the work. The team must strive to obtain evidence from different sources and of different nature because this will strengthen the conclusions (ISSAI / Appendix 3, 2004).

124 The team must determine the amount and type of evidence needed to meet the objectives and the audit plan adequately. Therefore, it is necessary that the evidence have certain attributes. They are (ISSAI / Appendix 3, 2004):

- a) validity - the evidence must be legitimate, that is, based on accurate, reliable information;
- b) reliability - ensuring that the same results will be obtained if the audit is repeated. To obtain reliable evidence, it is important to consider that: it is convenient to use different sources, it is interesting to use different approaches; external sources, in general, are more reliable than the internal ones; documentary evidence is more reliable than oral evidence; evidence obtained by direct observation or analysis is more reliable than that obtained indirectly;
- c) relevance - the evidence is relevant if it is linked, in a clear and logical way, to the criteria and objectives of the audit;
- d) sufficiency - the amount and quality of the evidence obtained must persuade the reader that the findings, conclusions, recommendations, and determinations of the audit are well founded. It is important to remember that the quantity of evidences does not replace the lack of other attributes (validity, reliability, relevance). The greater the materiality of the object being audited, the audit risk and the degree of sensitivity of the auditee to a certain subject, the greater the need for more robust evidences. The existence of previous audits also indicates that need.

125 Evidences can be classified into four types (ISSAI / Appendix 3, 2004):

- a) physical - observation of people, places or events. This type of evidence can be obtained by means of photographs, videos, maps. Physical evidences often cause great impact. A photograph of an unsafe or unhealthy situation, for example, can be more convincing than a long description;
- b) documentary - the most common type of evidence. It may be available in physical or electronic media. It is obtained from existing information such as letters, memoranda, correspondence, contracts, statements, reports. It is necessary to evaluate the reliability and relevance of the information regarding the audit objectives;
- c) testimonial - obtained through interviews, focus groups, questionnaires. For the information to be considered testimonial evidence, not just background, it is necessary to corroborate it by means of a written confirmation from the interviewee or by the existence of multiple sources that confirm the facts;

d) analytical - obtained through analysis, comparisons and interpretations of existing data and information. This work may involve analysis of rates, patterns and trends, typically through computer processing. It is the kind of evidence that is more difficult to obtain.

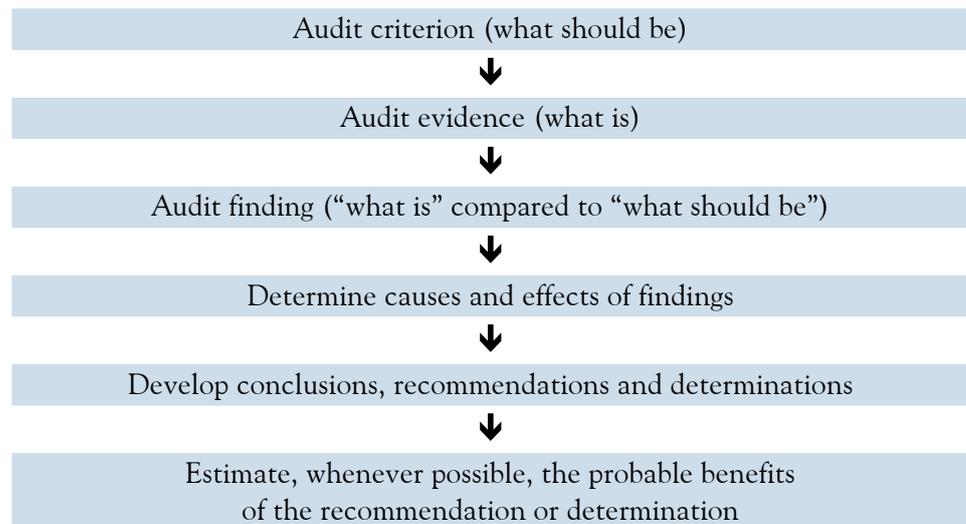
126 The audit team should assess whether the lack of appropriate and sufficient evidence is due to methodological strategy failures or malfunctions of the audit object, such as internal controls failures or operational and structural problems. In the first case it may be necessary to amend or revise the methodological strategy of the audit objective and scope. In the second case, the problems identified are audit findings.

127 The audit team should consider that some evidences may contain problems or weaknesses. The main concern refers to (ISSAI / Appendix 3, 2004):

- a) evidences based on a sole source;
- b) testimonial evidences not corroborated by documents or observation;
- c) evidences whose costs of production do not meet the criteria of cost-benefit analysis;
- d) evidences only from the manager or the audited team;
- e) evidences whose sole source is biased with respect to the result of the work;
- f) evidences obtained from non-representative samples;
- g) evidences related to isolated occurrence;
- h) conflicting evidences.

128 There are some techniques that can help to obtain more robust evidences. One is circularization which is the confirmation by third parties of facts and information submitted by the audited institution (BRAZIL, 2009a). Another is triangulation, which is the use of different research and data collection methods to study the same subject, aiming at strengthening the findings (PATTON, 1987).

**Table 3**  
Logical process  
for identifying  
findings and producing  
recommendations  
and determinations



Source: ISSAI 3000/4.3, 2004.

## Development of field work

129 The field work consists of collecting data and information set out in the audit planning. The type of data to be collected and sources of such data will depend on the methodological strategy and on the criteria established. Data collected must be accurate, complete, and comparable. Often, this collection is considered a mechanical task and the least interesting part of the audit. However, it is an important activity and consumes lots of time and effort (HATRY, WINNIE, FISK, 1981). The quality of collection, analysis, and documentation of data is essential to ensure the success of the audit (ISSAI 3000/4.2, 2004).

130 Typically, data collection is done *in loco* and the team applies the tools developed and tested in the planning phase. The most used methods of data collection are interviews, questionnaires, focus groups and direct observation.

131 When the objective of the audit includes the generalization of findings for the universe of the research, the solutions more commonly adopted are statistical treatment and case study. If the case study is representative, it is possible to generalize the results, i.e., the findings identified in a case may be applied to other cases (NAO, 199 -).

132 It is important that the auditor obtain the best possible information - facts as well as opinions, arguments and reflections - from different sources and seek out the help of specialists (ISSAI 3000/4.6, 2004). The auditor should look for the evidences needed to answer audit questions and be careful not to divert the focus of the work or collect a large amount of information that is often unnecessary and irrelevant (POLLITT et al, 2002).

133 For the success of the field work, it is necessary to carry out various operational activities. Before performing the audit, the team must:

- a) schedule study visits, interviews and focus groups;
- b) provide presentation letters;
- c) book tickets and hotels;
- d) inform contact telephone numbers to the supervisor;
- e) prepare necessary material (copies of questionnaires, scripts, interviews, focus groups and direct observation).

134 Completion of the findings matrix should start during field studies, as findings are noted. The clarifications that may be necessary should be collected while still on the field in order to avoid misunderstanding and possible further requests for information, with the consequent waste of effort (BRAZIL, 2009a).

## Analysis of collected data

135 During the field work, the team gets lots of data, which must be arranged, separated and analyzed. Those who demonstrate the findings of the audit are selected and thus help answer its questions. The other information should be discarded, in order not to divert the audit from its focus and not to delay the analysis of relevant data (POLLITT et al, 2002).

136 Tools and techniques are used to analyze the data collected. The definition of the method shall depend on the methodological strategy adopted. The Appendix presents the main analytical techniques and the document Data Presentation Techniques (BRAZIL, 2001) provides guidance on the most appropriate ways of communicating the test results produced.

137 The final stage of data analysis consists in combining the results obtained from different sources. There is no general method for doing this, but it is essential that the auditor interpret the data and information collected in a careful and systematic way. For this activity, it is necessary to analyze arguments and statements, consult experts and make comparisons. It is also vital that the auditor adopt a critical approach and maintain objectivity with regard to the information available. At the same time, the auditor must be receptive to different arguments and points of view (ISSAI 3000/4.2 and 4.5, 2004).

## Findings matrix

138 The findings and information obtained during the audit and the proposal for conclusions, recommendations and determinations are recorded in the findings matrix.

139 The findings matrix is a useful tool to support and guide the preparation of the audit report, because it allows gathering the main elements that constitute the central chapters of the report in a structured way. The matrix enables members of the audit team and other stakeholders to have a homogeneous understanding of the findings and their components. The items of the findings matrix are presented in Table 4.

Audit question (repeat the planning matrix question).

Situation found	Finding					Good practices	Recommendations and determinations	Expected benefits
	Criterion	Evidences and analysis	Causes	Effects				
Most relevant findings, identified in the execution stage	Pattern used to determine if the expected performance of the audited object is satisfactory, exceeds expectation or is unsatisfactory	Result of application of the data analysis methods and their use in the production of evidences. That is, the techniques used to handle the information collected during the execution and the results achieved should be indicated.	May be related to the operation or design of the audit object or may be out of the control or influence of the manager  Identification of the causes requires robust evidences and analysis  The resolutions contain the measures required to solve the causes of unsatisfactory performance	Consequences related to the causes and to the corresponding findings.  It may be a measure of the relevance of the finding.		Actions identified that undoubtedly lead to good performance. Such actions may subsidize the proposal for recommendations and determinations	They should deal with the origin of the diagnosed problems. There should be parsimony in the amount of deliberations and solution of the main problems should be prioritized.	Improvements expected when implementing the recommendations and determinations. The benefits may be quantitative and qualitative.  Whenever possible, quantify them.

**Table 4**  
Model of findings matrix

140 During the audit, the situations encountered are compared with the criteria previously selected and identified by the team. The differences observed are the findings of the audit, duly supported by evidences.

141 After characterizing the findings of the audit, the team must identify the causes and effects of observed performance. In general, these procedures are completed at the end of field work. However, depending on the complexity of the theme and incidental evidences, the analysis may extend to the reporting phase.

142 Whenever possible, the effect associated with the audit finding should be measured. For example, in the case of uneconomical processes, ill-planned purchases or unproductive equipment, the effects can be estimated in monetary values. On the other hand, the effects of inefficient procedures, idle resources or poor management can be sized up in terms of non-compliance with deadlines and wasted physical resources. The qualitative effects should also be mentioned, such as deficiency of control, inappropriate decisions or poor quality of goods or services offered. The difficulties of quantifying the potential benefits vary by type of benefit. However, in many cases, the financial benefits can be estimated with reasonable safety.

143 The cause of the audit finding is the basis for deliberations. If there are multiple causes for a single finding, staff should identify the one that, if modified, may prevent a similar situation. One must also consider the possibility of an identified cause being out of the control of the audited institution, causing the focus of deliberations to transcend the subject of audit.

144 The proposals for the improvement of administrative and operational performance are one of the most important aspects of performance audits. While the improvements required, and not the means to achieve them, constitute the objective of the deliberations, it is convenient to indicate which aspects must be examined by the manager in finding solutions.

145 When coming up with a proposal for deliberation, the team should consider the implementation cost and the resulting savings of resources, since the cost should not exceed the expected benefits. It is also important to highlight the most relevant aspects and to avoid an excessive amount of deliberations, which can divert the focus from managing the implementation of measures that remedy the main shortcomings of the object being audited. It may also hamper the monitoring of the deliberations and lead to an inadequate cost-benefit analysis.

### **Validation of the findings matrix**

146 After the elaboration of the findings matrix, its validation is done by a second expert panel. The main objective of this panel is to check the consistency of the matrix presented. At that time, participants are invited to discuss with the team the main findings of the audit, the sufficiency of the evidences collected, the adequacy of the tests performed and appropriateness of the measures proposed to solve the problems found. After the panel, the findings matrix must be validated by managers, in the same way adopted in the validation of the planning matrix.

147 The report is the main product of the audit. It is the formal and technical instrument through which the team communicates the purpose and audit questions, the methodology used, findings, conclusions and the proposed measures (BRAZIL, 2009a). Intosai provides international standards for elaboration of governmental audit reports to Supreme Audit Institutions.

**Intosai standard for preparing reports,  
applicable to performance audit**

At the end of every audit, the auditor shall prepare a written opinion or report, adequately recording the findings: its content should be easy to understand and free of vague and ambiguous ideas, and it should contain only information that is supported by competent and relevant evidences, it should be independent, objective, fair and constructive.

Source: ISSAI 400/7, 2001.

148 This chapter aims to establish standards and guidelines for preparing performance audit reports, to encourage the streamlining of the process and the creation of a unique identity. It also deals with the following sections of the textual part of the report: introduction, main chapters, analysis of feedback from managers, conclusion, and measures proposed. Details on the composition of each element in the report are in a specific document on development of performance audit report.

149 The communication of the results of the audit should report to society the performance of public administration, contributing to make public officials accountable of for the results of government action through parliamentary oversight and social control.

150 The demonstration of the quality of the work depends on how the audit questions are addressed in the reports. It is important that information be organized and prepared with technical accuracy and the appropriate level of detail and that the main points are highlighted. The text should be consistent with the logical sequence of arguments, forming a cohesive, convincing, visually clear and attractive whole. Therefore, being able to write quality reports is a key competence of professionals who carry out performance audits.

151 In order for the report to have quality, aside from the experience and skills of the authors, it is important that its elaboration follow the guidelines and standards of this manual.

## General guidelines for preparing the report

152 The elaboration of the audit report shall follow the following general guidelines:

- a) be conducted as an ongoing process;
- b) consider the viewpoint of the reader;
- c) be based on the findings matrix.

153 The preparation of the report shall be viewed as a continuous process of formulating, testing and reviewing ideas on the subject of the audit. Issues such as the potential benefit of the audit, possible recommendations and determinations, and the convincing argumentation on the findings should be considered throughout the audit. The establishment of deadlines for the delivery of intermediate parts may increase the likelihood that the report be ready in a timely fashion (ISSAI 3000/3.1, 2004).

154 Throughout all phases of the audit, emphasis should be in producing the final report (ISSAI 3000/3.1, 2004). On the one hand, there is no point doing an excellent job of planning or execution of the audits if the report is not able to communicate its message effectively. On the other hand, you cannot produce a quality report if the audit project is not consistent or if the evidences gathered are not robust.

### Intosai design on the elaboration of the audit report as an ongoing process

As the work progresses the preliminary audit report takes shape. Throughout the audit, data analysis and information involve considering the arguments and statements, consulting experts, making comparisons and analysis. Notes and observations are organized in a structured form (in the findings matrix) and, as internal and external discussions progresses, the text is drafted, evaluated and rewritten, details are given and conclusions discussed. Based on intermediate discussion texts, the main issues and conclusions can be debated, facts confirmed with the auditee and the proposals developed.

Source: ISSAI 3000/4.5 and 5.1, 2004.

155 In order for the reports to be useful and accessible it is important to take into account the views of the readers (ISSAI 3000/5.3, 2004, BRAZIL, 2001). Initially, the performance auditing reports will circulate internally, targeted mainly to the Rapporteur of the matter. They also aim to communicate performance information to policy makers, managers in the three levels of government, other of oversight and evaluation agencies. Additional documents that are complementary to the report, such as executive summaries, press releases and slide shows, have a broad audience and comply with specific guidelines.

156 The instrument used by the TCU to organize the main elements of the report is the findings matrix. The matrix is the basis for discussion about the structure of the text among members of the audit team, as well as for discussion with the supervisor of the work and for presentation before the expert panel.

157 The fact that the wording of the report is normally shared by the audit team members reinforces the need to have a tool that supports the elaboration of the report. It is natural that each member has his own style of writing. Therefore, it is necessary that the team discuss in advance the structure and form of presentation of the information.

158 Compliance with the elaboration guidelines and standards, as well as building common understandings through discussions during the audit, reduces the possibility of the texts produced being too disparate. It is desirable that the team remain concentrated until report writing has been finalized, performing cross revision of texts during such period. Such care will make the work of the team coordinator more efficient. He/she is in charge of should grant the work unity of form and style.

### **Elaboration standards**

159 The international standards for the elaboration of reports, applicable to performance audits, summarize the main characteristics of a good report (ISSAI 400, 2001). At TCU, one must observe the requirements of clarity, conciseness, conviction, accuracy, relevance, timeliness and objectivity (BRAZIL, 2009a), as well as those regarding completeness and persuasion (ISSAI 3000/5.2, 2004). Definition of these characteristics by TCU follows.

160 Clarity - produce a text that is easily understood by the informed reader. To enhance clarity and understanding of the report:

- a) define technical terms;
- b) define the meaning of acronyms in the corresponding list and use the name in full the first time it appears in the text;
- c) present facts accurately;

d) submit evidences and present arguments logically;

e) use short sentences, avoiding long periods that extend for several lines;

f) create textual cohesion through logical sequencing of ideas and use of appropriate connectives;

g) prefer using the direct order (subject, verb, object and complements), avoiding interspersed phrases, parentheses and dashes (BRAZIL, 2009a);

h) complement the text with illustrations, photographs, charts, diagrams, maps, text boxes and tables;

j) avoid the use of synonyms to refer to the same things. Unlike a literary text, the report should use the same terms from start to the end;

j) avoid abbreviations;

k) avoid erudite terms and expressions in other languages.

161 Conviction - to explain the findings and conclusions firmly. Avoid expressions that convey uncertainty and doubt to the reader, such as "except better judgment" or "seems." The information presented should convince readers about the validity of the findings, the reasonableness of the findings and benefits of implementing the proposals. Therefore, the findings should be presented in a persuasive way, articulating the findings and proposals so that they derive logically and analytically from the facts and arguments presented (ISSAI 3000/5.2, 2004). The report must be convincing so that the Court's deliberations gain support from players capable of influencing the management of the audited object, are implemented and generate performance improvements for the benefit of the society.

162 Conciseness - produce text that is not more extensive than necessary to convey the message and support the conclusions (ISSAI 3000/5.2, 2004). For concision, one should give preference to indirect quotes in place of lengthy transcripts of original texts, summarizing the information intended to be transmitted. As a standard guideline, the textual

part of the performance audit reports, except the proposal of measures, should not exceed 50 pages. The analysis of very complex issues may require more lengthy however, complete and also concise reports are most useful to the reader and are more likely to be read by a larger audience (ISSAI 3000/5.2, 2004).

163 Accuracy - ensure that all information provided is accurate and properly recorded. Accuracy is essential to assure to the reader that the report is credible and reliable. An inaccuracy in the report may cast doubt on the validity of the work as a whole and divert attention from important issues (ISSAI 3000/5.2, 2004). Accuracy also means that the scope and methodology be correctly described and the findings and conclusions be presented consistent with the scope of the audit (ISSAI 3000/5.2, 2004). In addition, the report shall inform on the data quality and the degree of accuracy of estimates. Inaccuracies may damage the image of the oversight agency.

164 Relevance - expose only what is important, considering the objectives of the audit. Avoid long descriptive passages that add information that is not necessary to support the arguments. The reports need not include all the situations encountered, whose record are preserved in the work papers.

165 Timeliness - meet the deadline for the elaboration of the report without compromising quality (BRAZIL, 2009a). The report shall provide updated information so it can subsidize audited bodies, as well as policymakers and other stakeholders interested in improving their activities. The content of the information should therefore add value. (ISSAI 3000/5.3, ISSAI 2004; 400/8.i, 2001). Failure to meet deadlines affects the supervision of the audit, the participation of audited bodies and concluding the process.

166 Objectivity - produce impartial, balanced and neutral texts (ISSAI 3000/5.3, 2004). Some aspects of objectivity in conducting the audit, which will reflect in the report are:

a) the methodological strategy set for the audit shall ensure that the selection of facts investigated and presented in the report is not biased (ISSAI 3000/5.3, 2004);

b) the findings and the report should be based on the evidence obtained;

c) facts should be registered according to their relevance to the scope of the audit. Relevant facts should not be excluded nor should minor flaws be exaggerated (3000/5.3 ISSAI, 2004);

d) explanations by the management shall always be requested and critically evaluated (ISSAI 3000/5.3, 2004);

e) the facts must be presented separately from the opinions (ISSAI 3000/5.3, 2004);

f) the language should be free of any tendentious or ambiguous connotation, to avoid defensiveness and opposition (ISSAI 3000/5.3, 2004);

g) the audit report shall mention both negative findings as positive facts. Although the report is focused on failures and poor performance, the presentation of evidences in a non-biased way helps to increase its credibility (ISSAI 3000/5.3, 2004)

h) frailties and critical findings shall be presented in a way that induces solving the problem and improves internal systems and guidelines (ISSAI 400/24, 2001);

i) the report should be drafted so as to denote impersonality.

167 Completeness - present all information and arguments necessary to meet the audit objectives, allowing a correct understanding of issues and situations described and record all the elements needed to compose the report (ISSAI 3000/5.2, 2004). The relationship between goals, criteria, findings and conclusions must be verifiable and expressed in a clear and complete form. (ISSAI 3000/5.2, 2004).

## Data presentation

168 A key element in the quality of the audit report is a comprehensive analysis of the data and how it is presented. It is important that the information is well presented to clearly communicate the report's conclusions, resolutions and analysis on which it is based (NAO, 1996).

### Intosai's guideline on disclosure of audit reports

Comprehensive reports and widespread distribution of all reports are key to the credibility of the audit function. If possible, each performance audit shall be published in a separate report.

Source: ISSAI 3000/5.4, 2004.

169 When planning the structure of the text, the sequence of illustrations should be planned in order to demonstrate the main evidences and conclusions that the audit team wishes to point out. There are several ways of presenting data including charts, diagrams, maps, photographs, text boxes. Guidelines on the submission of data are found in a specific roadmap of TCU (BRAZIL, 2001).

## Citations and references

170 Brazilian law permits the unauthorized use of works for purposes of study, criticism or controversy. Such use is also authorized when the objective is to produce administrative, non-profit proof, as long as the right to citation is observed (Law No. 9.610/1998, art. 46). The Brazilian Association of Technical Standards (ABNT) states how information collected from other sources should be cited and how references should be elaborated (ABNT, 2000, 2002).

## Components of the audit report

171 The report is, in its essence, the communication of the audit findings, the issuance of a qualified opinion on performance and the articulation of arguments in favor of the adoption of certain measures to improve performance. These findings and arguments will be developed in the main chapters of the report.

172 The main instrument for supporting the preparation of the audit report is the findings matrix. The matrix is a synthetic representation of the audit results, which shall be developed in the report. That is why it is important to discuss the matrix among team members, with managers and other relevant stakeholders, before starting to write the text.

173 The audit report is divided into pre-textual elements, text and post-textual elements. The pre-textual elements are: cover page, abstract, list of acronyms,

list of figures, list of tables and table of contents. The text consists of: introduction, overview, main chapters, analysis of the responsible officials' comments, conclusion and proposal of measures to be taken. The post-textual elements are: appendices, references and glossary.

174 The text should be divided into chapters, and these, into subtitles. Section is the generic name of any part into which the text of a document is divided (ABNT, 2003). The paragraphs of the text should be numbered sequentially, starting with the introduction, with no unfolding by chapter number. The numbering of subtitles is the chapter number to which it belongs, followed by a period and the number assigned to it in the sequence of the subject (ABNT, 2003).

**Table 5**  
**Recommended Structure**  
**for the textual part of the**  
**performance audit report**

<b>1. Introduction</b>
Simplified identification of the audit object
Background
Objectives and scope of the audit
Criteria
Methodology
<b>2. Overview</b>
<b>3. First main chapter</b>
Objective of chapter
Specific contextualization for the chapter
Description and contents of the chapter
<b>3.1 Subtitle</b>
Opening impact paragraph, with a concise description of the finding
Criterion
Analysis of evidences
Causes
Effects and risks of maintaining the situation found
Good practice
Conclusion
Proposal
Expected benefits
<b>4. Analysis of the responsible officials' comments</b>
<b>5. Conclusion</b>
<b>6. Proposal of measures</b>

Note: There is no need to create titles to indicate the content of paragraphs.

175 The introduction is the initial part of the text and must contain the information necessary to situate the subject of the audit. It consists of the following elements:

- a) simplified identification of the audit object. Details are presented in the overview;
- b) background which contemplates the reasons that led to the audit, the decision that authorized the audit and existence of previous audits on the same object;
- c) objectives and scope of the audit which should clearly set out the general and specific goals and limits of the work, specifying the systems or aspects that were audited, as well as the justification for adopting the approach described;
- d) criteria, which shall contain general patterns used to issue an opinion on the performance of the audit object. They may include the basic conceptual framework in more complex audits as well as the source of the performance standards used. Specific criteria applicable to audit issues shall be described in the relevant chapter, and
- e) methodology, which includes the methods used in data collection and analysis. The methodology should be discussed briefly, recording details in the Appendix. Limitations imposed on the work associated with the methodology used to investigate the issues, with the audit reliability or the difficulty in obtaining data, as well as limitations related to the actual scope of work - i.e. the areas and issues not discussed - shall be mentioned.

176 Optionally, when it is necessary to clarify the logic of the narrative, may be added a paragraph can be added at the end of the introduction describing how the report is organized. This paragraph shall have a brief description of the topics discussed in the main chapters, highlighting the logical connection between them

177 The overview discusses the characteristics of the object audit required to understand the report by making correlations with the objectives of the audit, if applicable. The analytical texts arising from the application of diagnostic techniques are important to support the writing of this chapter. Some elements of the overview can be: objective, individuals in charge, history, beneficiaries, main products, relevance, performance indicators, targets, budget issues, decision making process, control systems.

178 The information that will comprise the overview depends on the audit objectives. Furthermore, for the sake of brevity, it is possible to provide specific information in the main chapters without repeating them in the overview. Likewise, it is possible to register in an appendix historical data or other context information not directly related with the objective of the audit.

## Main chapters

179 The main chapters are composed of an articulated and founded description of the findings of the audit. The chapters should be presented in decreasing order of relevance, i.e., they begin with the theme that proved to be the most important one. The same applies to the presentation of findings within each chapter in subtitles presented in decreasing order of relevance. Therefore, the order proposed in the audit project will not always be maintained. Another way to organize the text is to go from the more general topics to the most specific ones. This may be the best way to present complex and inter-related matters which can be easily understood by reading the findings that introduce the context in which the others will fit in.

180 The recommended structure is intended to cover general and more frequent cases. Table 5 shows the typical sequence of presentation of information. It does not mean that every element of the report has to be presented in one paragraph or that all elements have to be present. As already explained

in this manual, depending on the audit question, it is not always possible to identify causes or make proposals, for example. Moreover, the discussion of evidences can be extensive and include the presentation of graphs, tables and other illustrations.

181 A crucial point of the report is the analysis of evidences. Evidences must be presented in a logical, articulated way and with illustrations that facilitate the comprehension of the situation encountered. The arguments supporting the position of the team should be confronted with the best contrary arguments (ISSAI 3000/4.5, 2004).

182 Subtitles must contain the conclusions concerning the point dealt with. The conclusions are statements related to the objective of the investigation derived from the analysis of the evidences, in contrast to the criteria.

183 Then, if necessary, the team shall submit a brief proposal which will be included in the chapter “proposal of measures”. However, this brief proposal shall have a different name. The proposal may be based on findings from more than one subtitle. To avoid their repetition in several parts, the proposal can be formulated along with the conclusion of the chapter.

184 Finally, the team shall quantify or, if it is not possible, estimate the benefits to be obtained if the proposals are implemented. Also to be concise and if appropriate, the team can estimate the expected benefits at the end of the chapter or in the conclusion of the report by grouping proposals that contribute to achieving the same benefit (BRAZIL, 2009) and detail the memory of calculation in the appendix.

### **Analysis of the responsible officials’ comments**

185 The audited body shall always have the opportunity to review the preliminary audit report before it is made public (ISSAI 3000/4.5, 2004).

Therefore, the technical unit shall request that the auditees submit their written comments on the preliminary report, establishing a compatible deadline. The preliminary report has all the elements of the final report, except the chapter on analysis of the responsible officials’ comments. This represents an opportunity for the manager to become aware of the findings, conclusions and proposals in their full context and in writing (ISSAI 3000/4.5, 2004). The technical unit may refrain from including the proposal of measures in the preliminary report if its knowledge by the managers represents a risk to the achievement of the audit objectives.

186 Managers shall be informed about the confidentiality of the preliminary report. The printed version of the report to be forwarded shall contain a diagonal watermark across all of its pages with the term CONFIDENTIAL.

187 The comments made must be examined in a statement in which the audit team will assess the need to revise points of the report or present arguments to maintain views that dissent from those of the managers.

188 When the audited bodies provide new information upon presenting their comments, the team should evaluate them according to the standards applicable to the evidences before incorporating them into the report (ISSAI 3000/4.5, 2004). If the new information and arguments of the audited bodies are important to clarify points of the report or are sufficient to change the understanding by the team, the changes will be made in the main chapters of the report, without mentioning them in the chapter on the analysis of the responsible officials’ comments. In this case, the analysis shall include information that changes were made in the report because of the responsible officials’ comments.

189 The information and arguments that are not sufficient to change the understanding by the team

should be reviewed in the chapter “Analysis of the responsible officials’ comments (ISSAI 3000/4.5, 2004), as recorded in the statement.

## **Conclusion**

190 This chapter shall bring the answers to the audit questions. Conclusions shall respond to the audit objectives, must be based on rationality and on specific criteria of the audit (ISSAI 3000/4.5, 2004). The conclusions of the report are statements by the team, deduced from the findings. They shall highlight the major points of the audit and the main deliberation proposals (ISSAI 3000/4.3, 2004).

191 Conclusions are synthetic statements and as such they inevitably omit or simplify some of the information recorded in the body of the report (NAO, 200 -.)

192. The conclusion shall emphasize in a balanced way the strong points of the audit object, the key opportunities for performance improvement and potential benefits expected, quantifying them, where possible, in terms of resource savings or other improvements. The difficulties faced by managers shall be reported and the positive initiatives taken by them to overcome the difficulties shall be highlighted.

## **Proposal of measures**

193 If deliberations are proposed, they must be clearly aligned with the findings and should be based on the causes of these findings (ISSAI 3000/5.2, 2004). The measures proposed are recommendations and determinations that the audit team proves necessary and that will contribute to remedy any deficiency identified by the audit.

194 The cause of the problem may be beyond the control of the audited body. In this case, the proposal may be directed to another body/entity, in which case it is recommended that it be discussed with stakeholders. Proposals must be formulated focus-

ing on “what” must be improved or corrected and not “how”, although circumstances may arise that require the formulation of specific proposals, such as an improvement or correction of regulations (ISSAI 400/25, 2001). This orientation is due to the fact that the audit team cannot claim to have discovered the only solution to the identified problem (ISSAI 3000/2.1, 2004). In the main chapters, the team can indicate possible measures that can be adopted by managers based, for example, on good practices.

195 In the elaboration of the proposal of measures the team shall stress the most important proposals, putting them in order or priority. The measures should also be grouped by addressee and theme. Thus, proposals that are related to each other, even if they were mentioned in different subtitles, shall be grouped because they are connected to a same theme.

196 Proposals should indicate in brackets the numbers of the paragraphs in which the subjects referred to appear in the report. Regardless of mention in the report, a determination should be proposed to the effect that the audited body prepare and submit to the Court an action plan. The plan shall contain the implementation schedule of the measures the manager will adopt in order to meet the proposed determinations and to correct the identified problems (BRAZIL, 2009a). The inclusion of proposals targeting other technical units must be preceded by negotiation between the title holders (BRAZIL, the 2009a) and be coordinated by the General Secretariat of External Control.

197 It is important to ensure that proposals are workable, add value and are related to the audit objectives (ISSAI 3000/4.5, 2004). Proposals shall subsidize the elaboration of the plan of action by managers, the monitoring of the implementation of the deliberations and the quantification of its effects. In view of this, the team must make only the necessary number of proposals to correct the major deficiencies.



198 Monitoring is the assessment of compliance with TCU's deliberations and of the outcomes derived from their implementation aiming at verifying the actions taken and assess their effects.

199 The main objective of monitoring is to increase the likelihood of resolution of the problems identified during the audit, either by the implementation of the deliberations or by adopting other measures initiated by the manager. Expectation of control created by systematic monitoring helps increase the effectiveness of the audit.

200 Monitoring allows managers and other stakeholders to follow the performance of the audited object, since it updates the diagnosis and provides information needed to verify whether the actions taken have contributed to the achievement of the desired results. Likewise, monitoring helps to identify the barriers and difficulties faced by the manager to solve the identified problems.

201 Through monitoring, it is possible to assess the quality of audits and identify opportunities for improvement, learning and quantification of benefits. In addition to supporting the selection of new audit objects, the information identified through monitoring is used to calculate the percentage of deliberations implemented and the cost/benefit ratio of audits, performance indicators of the effectiveness of the Supreme Audit Institutions.

## Plans of action

202 Considering that the manager is responsible for solving the issues identified during the audit, it is up to him/her to present a proposal of the measures to be adopted and their timetable. This is achieved through the plan of action.

203 The plan of action is a document submitted to TCU by the manager that formalizes the actions to

be taken to implement the deliberations proposed to correct the problems identified during the audit. It involves, basically, a schedule that defines those responsible of each action, the activities and deadlines for the implementation of the resolutions. This tool guides the monitoring process and tends to increase its effectiveness.

204 The preparation of the plan of action should be completed by managers and submitted to the TCU within the deadline stipulated in the Court Decision. It is advisable that representatives of the audit team guide the construction process of the plan, so that the document submitted meets the monitoring requirements and includes satisfactory steps to correct the problems identified. This interaction can be conducted through meetings with managers. The expected outcome of this effort is that the action plan be feasible.

205 It is recommended that the action plan include a section to record the benefits expected after the implementation of the deliberations. The benefits are what ultimately justify the audits. Benefits should be estimated with the managers, even during the audit. They may involve reduced costs, increased revenue, elimination of wastes, improving performance. It is also possible to obtain non-financial benefit, such as: organizational improvements, improvement of internal controls, social and economic benefits, reduction of the sense of impunity, increase of the sense of citizenship.

206 It should be noted that the benefits quantified at the time of the audit and listed in the action plan were estimated. However, the last monitoring report must contain the results actually achieved, the benefits obtained by the implementation of the deliberations and how to measure them. For example: "the implementation of this recommendation saved R\$2 million in operating costs." Whenever possible, the amount obtained, the measurement procedure

and the results arising from the implementation of the deliberation must be validated by the manager. Any conceivable divergence must be recorded in the report.

207 Depending on the complexity of the proposed measures, the difficulty of coordination between the bodies and entities involved in implementing these measures, and the resources needed to carry out the monitoring, the TCU can develop a monitoring plan to verify the adoption of measures and the evolution of the audited object.

### **Monitoring Systematic**

208. Right after the audit is examined by the TCU, it is recommended that the technical unit of the TCU in charge of the monitoring process contact the manager of the audited body or program to provide guidance about the audit monitoring. If there is interest, a meeting may be scheduled during which the TCU team will explain to the participants the monitoring systematic and will submit to the manager a model of the action plan to be delivered within the time established by the Court. It is suggested to invite representatives of the internal control board (whenever necessary), representatives of the audited object and other agencies and entities involved with the implementation of the recommendations and determinations.

209 If necessary, there will be other meetings between the interested parties, especially when the implementation of the deliberations is complex, demands more monitoring time, involves several governmental units or when any resistance from the auditee is noticed.

210 Based on the analysis of the action plan, the manager will be informed of the audit monitoring forecast. The monitoring schedule (quantity, periodicity, term) should be adapted to the particularities of each audit and defined based on the content of the TCU deliberations and the dates established in the action plan. It is important that the monitoring does not take long to start, so as not to lose the expectation of control. It is also not worthwhile to monitor

activities for a long period because, according to the experience of the Government Accountability Office (GAO), most of the deliberations are implemented up to three years after the audit is concluded.

211 When monitoring is carried out by means of an audit such audit will follow the same steps as a performance audit (planning, execution, reporting). However, there are some specific features which will be highlighted hereafter. Preferentially, the monitoring coordinator will be a member of the team that conducted the audit, which will make it easier to assess whether the measures taken by the managers are or are not suitable considering the deliberations. The person responsible for monitoring must contact the audit coordinator to obtain information about the conditions and peculiarities of the initial work that can subsidize the implementation of the monitoring.

212 When planning the monitoring process, the team will read the audit report, the action plan and other relevant documents. After reading the material, the team will request from the manager the documents and information needed for the monitoring process and will set a reasonable deadline for the manager to send them, consistent with the amount of information requested.

213 For the final monitoring, the technical unit responsible for the monitoring process will assess the convenience of using procedures for collecting and analyzing data similar to those used during the audit. The main reason for applying these procedures is the expectation of being able to measure benefits.

### **Monitoring report**

214 The monitoring report must be a stand-alone document, in other words, it must contain enough information so that it is not necessary to read the audit report and other monitoring reports in order to understand the topic. The monitoring report aims to: show the status of implementation of deliberations; to demonstrate, analytically, the effective benefit resulting from this implementation; and measure the audit cost/benefit.

215. The structure and form of elaboration of the monitoring report must follow the standards set by TCU (Brazil, 2009b). To the discretion of the team and the supervisor, the draft monitoring report may be sent to the managers so that they can add comments and suggestions they deem relevant regarding the findings. The analysis of these comments will be incorporated into the final report.

### **Status of Deliberations**

216. Based on data and information collected during monitoring, the team will classify the deliberations, according to the degree of implementation, in one of the following categories, during the period analyzed (BRAZIL, 2009b):

- a) implemented - when the problem identified by the audit and that is the object of the deliberation proposed has been resolved through measures incorporated into the regular activities of the audited object;
- b) not implemented;
- c) partially implemented - when the manager considered the measures concerning the implementation of the deliberations concluded, without fully implementing them.
- d) under implementation – if there is evidence that actions are underway in order to solve the occurrences identified during the audit and that led to the proposed deliberation;
- e) no longer applicable - due to changes in conditions or occurrence of facts which make it impracticable to implement the resolution.

217. When the deliberation is a determination, the words “implemented” and “under implementation” shall be replaced by the words “fulfilled” and “being fulfilled”. If TCU set a deadline for compliance with the deliberation it should be registered whether the deliberation is being implemented within the deadline or if the deadline has already expired.

218. The determination to prepare an action plan and the deliberations addressed to the Court Secretariat must not appear in the summary table and, therefore, must not be considered when calculating the percentage of implementation. (i.e., send copies of the Court Decision, file the report, publish the report in an internal document of the TCU).

**Table 6**  
**Example of a table with a**  
**summary of the implementation**  
**status of deliberations**

Status	1st Monitoring		2nd Monitoring		3rd Monitoring	
	Itens	%	Itens	%	Itens	%
Implemented / Fulfilled	9.1.4; 9.1.7; 9.1.12	17	9.1.2; 9.1.4; 9.1.5; 9.1.7; 9.1.12; 9.3	32	9.1.1; 9.1.2; 9.1.3; 9.1.4; 9.1.5; 9.1.7; 9.1.8; 9.1.10; 9.1.11; 9.1.12; 9.2.1; 9.3; 9.4.2; 9.5; 9.6	83
Partially Implemented/ fulfill		0	9.1.1; 9.1.3; 9.1.6; 9.1.8; 9.1.9; 9.1.10; 9.1.11; 9.2.1; 9.2.2; 9.4.1; 9.4.2; 9.5; 9.6	68	9.2.2; 9.1.6; 9.1.9	17
Under implementation	9.1.1; 9.1.2; 9.1.3; 9.1.5; 9.1.9; 9.1.10; 9.1.11; 9.4.1; 9.4.2; 9.5; 9.6; 9.2.2	66		0		0
Not implemented / not fulfilled	9.1.6; 9.3; 9.2.1	17		0		0
No longer applicable	9.1.8				9.4.1	

Source: Brazilian Court of Audit - TCU  
(Monitoring Reports: TC and TC 012.271/2003-0 003.805/2005-5).

219 Quality Control in performance audits is the set of policies, systems and procedures established to ensure that the works will reach their goals, have technical excellence and are in accordance with the rules and professional standards established. (ISSAI 3000/Appendix 4, 2004).

220 The way performance audits are carried out and the excellence of the reports produced can affect the image of TCU. In view of this, it is important to ensure that all activities are developed with high quality standards (NAO, 2006). Quality control is also important because it enables the continuous improvement of the work developed by incorporating the lessons learned.

221 The supreme audit institutions must establish quality assurance systems and procedures which must ensure that all audits are developed in accordance with pertinent standards and policies (ISSAI 3000/3, 2004). At TCU, it was established that all audit work must be the subject of quality control (BRAZIL, 2005).

222 Quality when carrying out performance audit is ensured by adherence to specific principles, procedures and methodologies, aiming at achieving increasing levels of objectivity, reliability, consistency, and utility in the elaboration of reports and other documents produced. Quality control is exercised with the following goals:

- a) ensure the quality of the audit reports (ISSAI 200/1.27, 2001);
- b) identify opportunities for improvement in future audits and avoid repeating deficiencies (ISSAI 200/1.27, 2001);
- c) find weaknesses in the development of the works and correct them promptly;
- d) reduce the time for dealing with audit cases;

e) reduce the need of rework to correct deficiencies;

f) highlight good practices that can be disseminated;

g) contribute to skills development through identification of training needs;

h) identify the need to revise or draft technical documents containing guidelines for implementation of the activities;

i) feed the administration with reliable and systematic information about the quality of the work (NAO, 1996).

### Quality Control Modalities

223 Quality control is an ongoing process that encompasses supervision and guidance activities of the team by the supervisor in all phases of the performance auditing cycle, as well as the activities initiated by the team and the work reviewed by other agents. Quality control can be concomitant or *a posteriori*.

224 Concomitant quality control deals with the activities undertaken during the audit cycle. It involves team orientation by the supervisor regarding the audit conception, the working method and analysis of evidence, as well as the activities shared by the supervisor and the team, such as schedule follow-up, periodic reviews of working papers, expert opinion consultation and expert panels. *A posteriori* quality control may be exercised through internal and external reviews of working papers and reports produced after the conclusion of the audit.

225 Besides the adoption of control procedures, promotion of quality can also be performed through initiatives prior to the audits, such as the elaboration of manuals to guide implementation of the work and

seminars and training courses aiming to strengthen the audit teams for further work (NAO, 1996).

226 Another effective way to promote audit quality is to create working conditions that foster dialogue, delegation and mutual trust within the organization, as well as the auditors sense of responsibility (ISSAI 3000/ Appendix 4, 2004).

### **Main roles of the actors involved in quality control**

227 The role of the supervisor is essential to ensure the achievement of the audit goals and to maintain the quality of the work, regardless of the auditor's individual competence. It is noteworthy that, generally, in performance auditing it is more important to support the audit teams in their initiatives in order to reach a high level of work quality than to supervise them in the traditional sense (ISSAI 3000/Appendix 4, 2004).

228 It is the supervisor's role to guide and review the audit technically. Guidance is a proactive activity and encompasses discussing with the team the merits of the conception of the work, of the audit project, of the conclusions, of the proposal of measures, as well as making available resources to carry out the audit. The review of documents produced refers to the report, to the planning and findings matrices, to the audit project and other work papers, considering the complexity of the audit.

229 The supervision of the work must seek to ensure that (ISSAI 300/2.3, 2001):

- a) the audit goals are achieved;
- b) the skills needed to implement the audit are known by the team or incorporated upon request or by hiring services.
- c) team members have a clear and consistent understanding of the audit project;
- d) the audit findings and conclusions are based on reliable information and valid, consistent, relevant and sufficient evidences;

e) the audit is performed according to standards and technical rules adopted by TCU

f) the audit project is completed;

g) the resources needed to implement the audit are available, such as technical services, equipment and means of transportation.

230 It is the responsibility of the coordinator to promote discussions with the audit team to define the scope of the work, the methodological strategies and the procedures and techniques to be used. The selection of goals, problems and the audit questions largely determines a big part of the quality of the work (ISSAI 3000/2.1, 2004).

231 The audit coordinator must also, hold regular meetings with the team to discuss problems encountered during the development of the activities and the necessary adjustments in the working papers produced; to report to the supervisor the work progress and discuss with him the treatment to be given to any problems and difficulties; to review all documentation obtained during the audit, including the contributions of the members of the audit team to the report, and prepare the final version of the report. In addition, the coordinator must ensure that:

a) the audit goals are defined considering the data available about the performance of the audited object;

b) appropriate criteria are defined to evaluate audit questions to be investigated;

c) the team members have investigated, documented and understood the key aspects of the audit object;

d) the audit objectives are clear for the team members and the auditee

e) a good working environment is maintained among the members of the audit team and between the staff and the auditee

f) the use of several techniques follow the audit requirements contained in the corresponding technical documents;

g) the deadlines are met and, if necessary, propose to the supervisor amendment to the schedule .

h) the team members take responsibility for performing tasks consistent with their knowledge and skills;

i) the audit project contains all the information needed for the work proposal assessment.

### Quality Control Tools

232 Quality control in performance audits is accomplished with the support of certain techniques and routine procedures that make its implementation easier. The main quality control tools are:

- a) quality checklists;
- b) schedule;
- c) planning matrix;
- d) findings matrix;
- e) expert panels;
- f) responsible officials' comments.

233 The checklist verifies the activities that were performed and compliance with quality standards applicable to activities, work papers and audit products. Checklists can be used concomitant with or after the audit. When applied concomitantly, the checklist facilitates supervision, as it allows the verification of implementation of key measures by the audit team in the several stages that comprise the audit work and a timely correction of the deficiencies. When applied *a posteriori*, the checklist helps identify opportunities for improvement when conducting future work and avoid repeating deficiencies.

234 The schedule allows the team to plan and organize their activities. It also facilitates the allocation of team members according to the procedures provided and the time available. It must contain the list of tasks to be performed, those in charge of each task, and the deadline for implementation. After being agreed between the team members, the schedule must be submitted to the supervisor, who shall use it to monitor work progress.

235 The planning matrix records the audit goals as well as the questions that will be investigated and what are the possible conclusions. Thus, it is a basis for discussing the conception of the work and for subsequent monitoring of the implementation of the audit project. This instrument systematizes and details the procedures provided for implementing the work, therefore, it helps to identify failures and lapses in planning activities. Since the methodology elements are organized in specific columns, it shows if the required information is sufficient to answer the proposed questions. It also allows verifying if such information can be supplied by the information sources listed and if they are coherent with the methodological strategy and with the collecting and analyzing data methods. The following points of the planning matrix must be reviewed:

- a) Was the audit problem properly explained?
- b) Have the audit questions been clearly formulated?
- c) Is there a clear and satisfactory relation between the audit questions and the problem to be investigated?
- d) Were the chosen methodologies (strategies, data collection and analysis methods) appropriate to answer the formulated questions?
- e) Were the limitations identified?
- f) Are the work audit conclusions ("what the analysis will allow to say") consistent with the proposed methodology? And do they answer the audit question?

236 The findings matrix contributes to quality control since it helps to systematize and analyze the audit results. The findings matrix is important in order to correctly prepare the audit report because it provides, in a structured way, the findings and its evidence, causes and effects, elements that are a part of the main chapters of the report. For example, it is possible to ascertain whether the findings are supported by reliable and sufficient evidences; if the proposed measures are adequate and focused on the causes of the problems to be corrected; and if the audit questions were answered.

237 The expert panel is an important practice which enables audit quality control through the review of the planning and findings matrices. Both the planning and findings matrices must be validated in expert panels. Normally, other TCU auditors with knowledge of the audit subject are invited to be a part of the expert panel, as well as members of the rapporteur's cabinet, internal control representatives and external experts. The expert panel aims to evaluate the audit logic and the rigor of the methodology used. It, also, allows the team to be advised about flaws in the design and development of the procedures.

238 It is recommended that, after making the adjustments deemed appropriate, resulting from the expert panels, the planning and findings matrices be presented to the managers responsible for the audit object evaluated, so that their comments can also contribute to improving work quality. Similarly, sending the preliminary version of the audit report to the managers for their comments helps clarify obscure points, correct inaccurate or inconsistent information, as well as improve the proposed measures.

239. Besides concomitant quality control carried out by the technical unit that performs the audit, it is desirable to establish systems and procedures to confirm if the quality assurance processes work properly (ISSAI 200/1.27a, 2001). These procedures include the use of checklists by the TCU technical units in charge of examining the quality of the work after its completion as well as *a posteriori* revision of the reports by experienced auditors from other technical units, cabinets or external experts.

### Planning Matrix: How to complete the matrix

Although the planning matrix elements are presented sequentially, the definition of the audit questions, the choice of appropriate methodological strategies, as well as the results to be achieved with the proposed analysis (what the analysis will allow to say) occur simultaneously and this information is confronted in order to ensure the logical consistency of the audit project.

### Required Information

To determine the type of information needed to answer the audit question, the key terms used must be defined and their dimensions or variables identified. For example, in formulating a question involving the impact of a government initiative focused on improving the level of education, it is important to define the meaning of “education level improvement”, identifying the dimensions involved in that concept. The task of translating abstract concepts into measurable variables is essential to clearly specify the type of information to be collected.

### Information Sources

For each type of information a particular source must be identified. Examples of information sources:

- a) institutional and legal documentation that supports the audit object;
- b) budget legislation (PPA, LDO e LOA);
- c) declared mission, strategic plans and management reports;
- d) pronouncements made and decisions taken by the competent authorities;
- e) organization charts, internal guideline and operating manuals;
- f) meeting minutes;

- g) management information systems;
- h) computerized databases;
- i) public administration information systems; (SIAFI, SIGPlan, SIDOR, SIASG);
- j) specialized bibliography;
- k) managers and specialists;
- l) beneficiaries of government programs;
- m) reports and studies produced by accredited sources;
- n) specialized media.

Special attention should be given to the use of magazines, newspapers and other journalistic publications as well as information taken from the internet since, while they may provide background information and indicate the relevance of a given topic, they are not subjected to qualified review, which is a characteristic of scientific publications (peer review). Other publications, even the official ones, must be interpreted with reservation since there is the possibility that they present the facts selectively, so as to support a particular point of view (LEE; LINGS, 2008).

### Methodological Strategies

Methodological strategy is the general form of the investigative design that will be adopted in the audit. The approach and methods to be employed in the investigation of each question and sub question formulated must be recorded. The methodological strategy is directly related to the quality of the evidences that can be obtained, which in turn will influence the reliability of the work conclusions.

The International Organization of Supreme Audit Institutions – Intosai lists suitable approaches to answer some of the typical audit questions (ISSAI 3000/Appendix 1, 2004), according to table 4:

**Table 7**  
Main approaches  
in performance auditing

Audit matter	Approaches
Is the program achieving the envisaged goals?	Study on achieving goals or results
How does the program work?	Process study
What are the net effects of the program?	Impact Assessment
Do the program benefits exceed the costs? Are the goals achieved at the lowest cost possible?	Study on Cost-benefit and Cost-effectiveness
Are the activities and procedures adopted being conducted according to the best practice?	Benchmarking study
Is the evaluation quality acceptable?	Meta-assessment Study

Source: ISSAI 3000/Appendix 1.

Among the most used research methods in performance audits are file examination, case study and survey. Experimental, quasi-experimental, and non-experimental research used in program evaluation, are also part of the methodological strategy options.

a) File Examination: covers the examination of all sorts of administrative records, including official statistics. In addition to the material produced by the audited institution, TCU and CGU previous audits reports are investigated, as well as studies conducted by other institutions. It is called bibliographic research the one that covers bibliography that has been made public related to the subject of study. When conducting documentary research it is necessary to assess the reliability of the information disclosed, as well as determine the nature, location and availability of documents when starting the audit. This is to ensure the best use of the information at the lowest cost possible and to verify the feasibility of answering the question.

b) Case Study: “The case study is a method used to acquire knowledge of a **complex situation**<sup>12</sup>, based on **comprehensive understanding**<sup>13</sup> of the situation, gained from its **extensive description and analysis**<sup>14</sup> considered as a whole and in context”. [Emphasis added] (GAO, 1990, p.14). In performance auditing, the case studies are often complemented by other methodological strategies such as survey. According to Patton (PATTON, 1987, p.19):

Case studies become particularly useful when it is necessary to understand a specific problem or situation in depth and when it is possible to identify cases that are rich in information - rich in the sense that much can be learned from a small sample of the phenomenon. For example, usually much can be learned about how to improve a program studying dropouts, failures and selected successes.

<sup>12</sup> Complex situation means that many factors can influence the events and that these influences may interact nonlinearly, making it impossible to isolate the effects of the variables under study.

<sup>13</sup> Comprehensive understanding indicates that the case studies aim to obtain the most complete possible representation of what is happening and why.

<sup>14</sup> Extensive description and analysis refers to the use of rich and complete information derived from several sources, particularly from direct observation. In addition, the analysis is comprehensive, comparing data from different kinds of sources by using the method called triangulation.

c) Survey: survey is a methodological strategy that allows obtaining quantitative and qualitative information related both to operational and managerial aspects as to the expected outcome. It is often used together with case studies as a support for the qualitative analysis, typical of this strategy. When the survey is based on statistical sampling<sup>15</sup> it is possible to generalize the conclusions to the entire population. To guarantee this generalization, the sample should reflect the characteristics of the target population. Any deficiency of the used sample method must be taken into account when interpreting the survey results and shall be reported.

d) Experimental research: In experimental research, to assess if a program is the cause of a particular effect, two groups of research units (individuals, schools, hospitals, etc.) are selected: 1) the experimental or treatment group, which will be exposed to the program; 2) the control group, which will not be exposed. The observed differences in the results obtained by these groups, with some qualifications, can be attributed to the program. The procedure, considered in strict sense to be an experiment, requires that the research units in both groups be selected randomly. It aims to strengthen the conclusion about the causal nexus, ensuring that most factors not manipulated by the program and that could influence its results are evenly distributed between the two groups. Thus, only the program's effects could explain the differences observed.

e) Quasi-experimental research: Experimental research involves both practical difficulties, treated in the item above, and ethical difficulties (e.g. exclude from the program a potential group of beneficiaries so they can operate as a control group). Thus, the quasi-experimental research is presented as an alternative methodological strategy. Thus, the comparison groups are selected based on availability and opportunity. The strategies used in these cases are less robust than the ones employed in experimental research. The greater the initial differences

between the treatment and control groups, the more ambiguous the conclusions reached. To minimize this problem, groups which are as equivalent as possible must be selected, i.e. groups which can be compared. To ensure equivalence between the groups, it is essential to apply a pre-test to verify existing differences and, thereby, allow control and interpretation of the study results.

f) Non-experimental research: it is often impossible to use the quasi-experimental research model. The weakness inherent to such surveys is the fact that there is no control over alternatives explanations, i.e., the observed changes may have been caused by variables not related to the program. When the data collection is performed properly, such studies offer valuable information about the program. However, they present considerable problems when the objective is to establish an opinion about the program or determine to which extent the results can be attributed to it. So when it comes to program evaluation, such research must be conducted together with other methodological strategies.

## Procedures for Data Collection

Once the methodological strategy is defined, the procedures to be employed in the collection of data should be detailed in the planning matrix, using appropriate techniques. The most commonly used techniques are: questionnaire, interview, direct observation, and utilization of existing data.

The use of new data obtained from questionnaires, interviews, or records and notes from staff visits to project facilities, offers the possibility of producing something new and reliable, provided the benefits outweigh the costs incurred. If opting to use existing data, the team should assess the reliability of the data, as well as other aspects that could impact the quality of the evidence to be obtained. Table 8 summarizes the characteristics of the main data collection techniques and the relevant aspects of their use in performance auditing:

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<sup>15</sup> The survey whose object is all the members of a population is called a census.

**Table 8**  
**Summary of main data**  
**collection techniques**

TECHNIQUES	CHARACTERISTICS	APPLICATION IN PERFORMANCE AUDIT
Questionnaires	<p>Structured data collection method through the use of forms, used to quantify standardized information on a large number of research units. It enables to:</p> <ul style="list-style-type: none"> <li>-compare responses;</li> <li>-perform statistical analysis;</li> <li>-generalize the findings, in case of random samples.</li> </ul>	<p>The most frequently used methods are mail or Internet questionnaires. The main disadvantages are:</p> <ul style="list-style-type: none"> <li>-pre-testing and completion of research take a long time;</li> <li>-requires knowledge of questionnaire development and sampling design;</li> <li>-difficult to ensure accuracy of information provided.</li> </ul>
Interviews	<p>Face to face method of obtaining information through questions and answers. May be individual or in group, structured (closed questions), unstructured (open questions) or semi-structured (two kinds of questions).</p>	<p>A large part of performance auditing is based on interviews. According to the objectives of each stage of the project, the following are applied: preparatory interviews; interviews to collect data and information; interviews to identify attitudes and arguments; interviews to generate and evaluate ideas and suggestions. They can be used to confirm facts and corroborate data from other sources or explore potential recommendations.</p>

TECHNIQUES	CHARACTERISTICS	APPLICATION IN PERFORMANCE AUDIT
Direct Observation	<p>On site and systematic recording of information, pre-defined in a script. Requires specific training and preparation, for example, in techniques for field annotation, as well as concentration and selective perception ability. The trained observer should be able to collect accurate, valid, and reliable information.</p>	<p>Mainly used to obtain contextual information on how the object being audited is run. The benefits of this method can be summarized (Patton, 1987):</p> <ul style="list-style-type: none"> <li>-allows the observer to understand the context in which the activities are developed;</li> <li>-allows the viewer to witness facts, without relying on third party information;</li> <li>-allows a trained observer to perceive aspects that go unnoticed by participants routinely involved with the program;</li> <li>-can capture aspects of the program which participants may not wish to talk about during an interview, due to sensitive or embarrassing nature;</li> <li>-brings to the analysis the perceptions of the observer him/herself, which, when confronted with the perceptions of the respondents, gives a more complete vision of the program studied;</li> <li>-allows the observer to form impressions that extrapolate what is possible to record, even in the most detailed annotation fields, and that may help in understanding the program and its participants.</li> </ul>
Use of Existing Data	<p>The use of existing data requires special care by the audit team. Besides the reliability of data, other issues must be considered:</p> <ul style="list-style-type: none"> <li>-What type of data is available? Does it apply to the issue being investigated?</li> <li>-Is the data complete and is the coverage period sufficient for the analysis?</li> <li>-In what format is the data stored? What are the limitations concerning the format of the data and what are the difficulties in obtaining it?</li> <li>-What collection activities are carried out regularly? Was data collection performed with specific objectives?</li> <li>-Are there other sources of data relevant to the topic being investigated?</li> </ul>	<p>It is possible to aggregate values and extract original information from existing data, identifying trends and examining them in creative ways.</p> <p>If the audit is completely based on existing data, especially if from public domain, the team should pay special attention to the form in which the data is presented and to the most effective communication of the key idea (NAO, 1997). The use of specialized software can assist in the task of analyzing and presenting data in different ways. It is essential to take into account that any problem concerning the use of existing data and its possible limitations must appear as a caveat to the final conclusions of the audit report.</p>

Performance audits also use other data collection techniques, such as focus groups, expert panels, and seminars.

Data collection is a compromise between an ideal solution and a possible solution. An auditing project that is very ambitious regarding data collection, foreseeing a perfectly complete, precise, and exact form of collection, may impair the audit. The need to be accurate must be balanced with criteria of fairness, economy and relevance in light of the audit's objectives. Consequently, the audit report should always provide details on the quality of information and how it was collected (ISSAI 3000/4.5, 2004).

## Procedures for Data Analysis

Procedures to be employed in data analysis should be detailed in the planning matrix. Data analysis techniques are tools used to organize the collected data and to investigate the relationships to be established between the selected variables in order to answer the audit questions. The specification of the technique is a fundamental part of the audit and should, therefore, be included in the planning matrix. These tools correspond to the techniques adopted in data collection.

In general, data analysis is an interactive procedure, that is, initial analyses are carried out in the planning phase and the analyses are refined as the audit progresses. A wide variety of analysis techniques can be used in performance auditing, including multivariate statistical analysis, data envelopment analysis, and regression analysis. The most common are analysis of frequency tables and graphical analysis:

- a) Frequency tabulation: complex tabulations to check relationships. The analysis should be performed with the aid of appropriate software to allow the calculation of frequencies, hypothesis testing, and graphical representation of data. These techniques are used to analyze data collected through surveys or administrative data extraction;
- b) Graphical data analysis: through the use of graphs (histogram, Pareto graph, bar graph, setogram,<sup>xvi</sup> scatter plot, box plot<sup>xvii</sup>) it is possible to synthesize information and reveal trends, regularities, discontinuities, extreme performance (good and bad), unequal distribution of public goods and services.

Another type of analysis used is qualitative analysis by the team or consulting experts, based on professional judgment, of the information collected or generated by the team, recorded in process maps, performance indicators, official documents, evaluations performed by other agents. The type of analysis depends on the problem to be investigated and the resources available.

Qualitative analyses include the comparison and the contrast between information from different sources, from research units that have good and bad practices, and more general comparisons between research units (ISSAI 3000/4.5, 2004).

In addition to the general audit approach, the strategies that will be used to collect and analyze data must be recorded, for example (PATTON, 1987):

- a) Triangulation: use of different methods of research and/or data collection to study the same question, with the purpose of strengthening the final conclusions, taking on the following forms:

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<sup>16</sup> Pie chart.

<sup>17</sup> Box plot.

- collect data from different sources regarding the same question;
- employ different interviewers and field researchers in order to avoid bias in data collection;
- use multiple research methods to study the same question;
- use different theories to interpret the data collected.

b) Alternative interpretations: once an interpretation is formulated based on the main relations identified in the analysis, alternative interpretations should be sought; in case substantial evidences are not found to sustain these interpretations, trust in the interpretation that was originally formulated is reinforced (PATTON, 1987). In a quality performance audit, the arguments sustained by the team must be confronted with the best possible counter-arguments (ISSAI 3000/4.5, 2004).

c) Negative case: when related to the previous item, it is a question of identifying the situations that do not follow the main or current interpretation due to specific circumstances and that, for that very reason, are considered “exceptions (negative cases) that confirm the rule” and help to clarify the limits and characteristics of the main interpretation.

Effectiveness of the procedures explained above is based on the intellectual honesty of the analyst who should put the same effort into looking for negative cases or evidences that can sustain the alternative hypotheses as he/she puts into constructing the main interpretation.

The analysis process is interactive and shared with the team counting on the participation of the supervisor as well as consulting with other experienced auditors, experts, and managers. While the information is structured, compared, checked, and discussed with internal and external actors, the report should be drafted, evaluated, and rewritten (ISSAI 3000/4.5, 2004). It may be necessary to discuss these preliminary texts with managers and specialists to confirm data and develop arguments and proposals for recommendations (ISSAI 3000/4.5, 2004).

## Limitations

In this part of the Planning Matrix, the audit team should specify the limitations inherent to the methodological strategy adopted, the characteristics of the information intended to be collected, and the operational conditions for the accomplishment of the project.

As for the methodological strategy, it should be considered that there is no optimal or ideal strategy, but only one that, given the circumstances, best fits the issue to be investigated. Since there will always be some sort of limitation as to what

can be concluded from a certain methodology proposed, the best thing to do is identify these restrictions. The audit team must assess the existing alternatives and be prepared to defend their choices<sup>18</sup>.

Therefore, when opting for a methodological strategy, it is imperative to point out the inherent limitations either in terms of explanatory power or in relation to the possibilities of generalizing the results of the study<sup>19</sup>.

Regarding the information you wish to use in the analysis, it is important to mention what kind of difficulty one would be expected to find, both in relation to access to data as in relation to its quality and reliability. Any problems concerning the use of existing data and their possible limitations should be included in the planning matrix.

The team should indicate the alternative to be adopted to minimize the risks to the expected results due to limitations identified.

### **What the analysis will allow us to say**

That Audit Planning Matrix element records how data analysis will answer the audit question. The purpose of such information is to clarify which findings or results are to be achieved through the audit project. It is related to the former one because, naturally, what is expected from the analysis is conditioned by the limitations previously identified.

Thus, one must be register, for example: if the conclusions reached will fully answer the audit questions; whether it is possible to make conclusive statements on the audit subject and if the conclusions will be limited to the cases examined or if it will be possible to generalize them. These clarifications are needed so that it is possible to know, in the planning stage, what can be expected from the effort that will be undertaken by the team and resources that will be allocated in the development of the work.

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<sup>18</sup> About the adequacy and the explanatory potential of specific methodological strategies vide L. J. CRONBACH (1983, p.22-30) e PATTON (1987, p. 60-69).

<sup>19</sup> A good audit will take into account existing limitations, in other words, "... the strength of a study or a method can be determined by comparing what was done with what was possible. "(GAO, 1991, p.18).

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