

The implementation of the Internal Audit function within Sonatrach

تنفيذ وظيفة التدقيق الداخلي داخل سوناطراك

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Abstract:

This article explores the internal cognitive environment associated with the establishment of the internal audit function within Sonatrach. Drawing on international standards, regulatory frameworks, and an audit manual certified by one of the world's most prestigious auditing firms, the article highlights the crucial role of this function in strengthening governance, improving organizational performance, and managing risks. The analysis also sheds light on the specificities and unique challenges encountered during its deployment in a complex environment that is heavily regulated.

Keywords: Internal Control, Internal Audit, Standards, methodology of an internal audit engagement, Functional and Operational Limits.

Jel Classification Codes : A41, A42.

ملخص:

يستعرض هذا المقال البيئة المعرفية الداخلية المرتبطة بإنشاء وظيفة التدقيق الداخلي داخل شركة سوناطراك. استناداً إلى المعايير الدولية، والأطر التنظيمية، بالإضافة إلى دليل تدقيق معتمد من أحد أبرز شركات التدقيق العالمية، يوضح المقال الدور الحيوي لهذه الوظيفة في تعزيز الحوكمة، وتحسين الأداء التنظيمي، وإدارة المخاطر. يسلط التحليل الضوء على الخصوصيات والتحديات الفريدة التي تم مواجهتها أثناء تنفيذها في بيئة معقدة تخضع لرقابة صارمة من قبل اللوائح التنظيمية.

كلمات مفتاحية: الرقابة الداخلية، التدقيق الداخلي، الأطر المرجعية، منهجية مهمة التدقيق الداخلي، الحدود الوظيفية والتشغيلية.

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Introduction:

Internal audit is a key strategic lever for optimizing performance and managing risks within organizations. It is part of a collaborative approach, led by internal experts, aimed at improving the overall performance of the company. This strategic function plays a crucial role in the smooth operation of activities while providing targeted recommendations to strengthen risk management processes, internal control, and governance. It covers all areas of the company, including management, finance, and even sustainable development initiatives.

Within Sonatrach, the leader in the oil and gas industry in Algeria and a central player in the national economy, internal audit represents an essential strategic function. Due to the size of its operations and the complexity of its activities, a solid internal audit function is crucial. It not only ensures regulatory compliance but also aims to strengthen governance, optimize internal control processes, and manage financial, operational, and environmental risks.

This article examines the key steps to effectively integrate an internal audit function in a complex company like Sonatrach. It highlights the specific challenges of the oil sector, the essential success factors, and the long-term benefits that this approach can offer.

The challenges encountered are articulated around several key stages, each contributing to the assessment and improvement of organizational performance.

The first stage of internal audit involves gaining a deep understanding of the company's operations and structures. This includes a detailed analysis of activities, processes, and internal interactions. Such understanding helps identify the strengths and weaknesses of the organization while laying the groundwork for a relevant and consistent evaluation. This preparatory phase is essential to define the issues and establish a rigorous framework for analysis.

Next, employees play a vital role in internal auditing. Due to their proximity to operations, they provide a unique perspective on the processes in place and the daily challenges. Discussions with these stakeholders help uncover potential or real risks that could affect the organization's effectiveness. This participatory approach also encourages team buy-in for the audit's recommendations.

To ensure the credibility of the conclusions, internal auditing must be conducted with the utmost objectivity. The auditor must remain impartial and avoid any external influence that could distort their judgment. This rigor involves active listening, distinguishing between facts and opinions, and relying on verifiable data. A neutral and methodical analysis is essential to provide a reliable diagnosis and offer relevant recommendations.

Risk assessment is the heart of internal auditing. This step is based on continuous analysis of the potential or actual impacts of risks on the company's performance or objectives. Identifying the gaps between expectations and reality allows for prioritizing necessary interventions. By adopting a risk-based methodology, internal audit contributes to

implementing concrete and sustainable improvements, thereby strengthening the organization's resilience to uncertainties.

With its structured and rigorous methodology, internal audit plays a strategic role in improving performance and managing risks. By relying on a comprehensive understanding of the organization, gathering relevant information, impartial analysis, and a targeted risk approach, it provides solutions tailored to the specific challenges of companies. This approach, conducted with professionalism and transparency, serves as an essential lever for optimizing results and enhancing governance.

In a complex industrial and regulatory environment, internal audit proves to be an indispensable tool for ensuring the sustainability and performance of companies like Sonatrach. Through rigorous analysis and a risk-centered approach, internal audit strengthens governance, manages risks, and optimizes results, while guaranteeing long-term benefits for the organization.

I. Internal Control:

Internal control is a critical pillar of organizational management, designed to ensure smooth operation and sustainability. It consists of a set of processes, procedures, and mechanisms implemented to achieve strategic objectives, ensure the reliability of financial information, comply with laws and regulations, and protect resources.

This system relies on an organized structure that engages all stakeholders within the company, including leaders, employees, and governance bodies. Beyond its preventive aspect, internal control also aims to identify and mitigate risks that could compromise the organization's performance or reputation.

In a modern approach, internal control is no longer seen as just a monitoring mechanism but as a strategic lever. It promotes operational efficiency, improves transparency, and strengthens trust among internal and external stakeholders. This dynamic aligns with a broader vision of risk management and governance, emphasizing continuous improvement.

A thorough study of internal control first requires an understanding of its core concepts and guiding principles. These foundations help better grasp its role and integration within various management systems.

1. Regulatory Framework:

Internal control relies on a regulatory framework that varies depending on the industry, jurisdiction, and stakeholder requirements. This framework provides the necessary guidance for structuring and assessing internal control systems within organizations. It aims to ensure legal compliance, operational effectiveness, and transparency in risk management.

1.1 International Standards and Frameworks:

Several international standards and frameworks form the basis for internal control:

- **COSO (Committee of Sponsoring Organizations of the Treadway Commission):** This framework is one of the most widely used worldwide. It is based on five key components: the control environment, risk assessment, control activities, information and communication, and monitoring.
- **COBIT (Control Objectives for Information and Related Technologies) :** Adapted for information systems, COBIT is used to ensure governance and control of information technology.
- **ISO 31000:** While focused on risk management, this standard integrates well into a broader internal control strategy.

1.2 Legal and Regulatory Obligations:

In each country, local laws and regulations influence internal control practices. For example:

- **Sarbanes-Oxley Act (SOX):** In the United States, this law imposes strict internal control requirements, especially for publicly traded companies, to ensure the integrity of financial statements.
- **European Directive on Internal Control:** Companies in the European Union must comply with rules designed to enhance transparency and governance, particularly in the financial sector.
- **Sector-specific Regulations:** In sectors like banking, insurance, or energy, specific frameworks define minimum control standards.

1.3 General Principles of Compliance:

The regulatory framework imposes fundamental principles that each organization must adhere to:

- **Transparency:** Providing reliable and verifiable information to stakeholders.
- **Traceability:** Ensuring that processes and decisions are documented and accessible when needed.
- **Accountability:** Clearly identifying roles and responsibilities related to control activities.

1.4 Evolution and Adaptation:

The regulatory framework for internal control is constantly evolving to address new challenges, such as digitization, cyber risks, and sustainability. Organizations must integrate these changes to remain compliant while maintaining performance.

The regulatory framework for internal control is an essential foundation for structuring and evaluating control systems within an organization. By relying on recognized standards and complying with legal obligations, businesses can not only ensure compliance but also enhance governance and manage risks in an ever-changing environment.

2. Internal Control Framework Adopted by Sonatrach:

2.1 Definition According to COSO:

Internal control is a process implemented by the board, management, and staff of an organization, designed to provide reasonable assurance regarding the achievement of its objectives.

2.2 COSO Objectives:

The COSO framework (Committee of Sponsoring Organizations of the Treadway Commission) defines the objectives of internal control through a systematic and integrated approach. These objectives are divided into three main categories, reflecting the key challenges organizations must address:

2.2.1 Operational Objectives:

These objectives aim to ensure the efficiency and effectiveness of the organization's operations. They include:

- Optimization of performance and productivity.
- Proper utilization of available resources.
- Reduction of disruptions and malfunctions in processes.
- Achievement of strategic goals within set timelines.

2.2.2 Reporting Objectives:

Reporting objectives concern the reliability, transparency, and relevance of information communicated, both internally and to third parties. They include:

- Accuracy and consistency of financial and non-financial data.
- Compliance of reports with applicable accounting and regulatory standards.
- Assurance that the provided information enables informed decision-making.

2.2.3 Compliance Objectives:

This category aims to ensure that the organization adheres to laws, regulations, and internal policies. It involves:

- Strict compliance with local, national, and international regulations.

- Adherence to contracts and commitments made by the organization.
- Prevention of non-compliance that could lead to penalties or damage the organization's reputation.

COSO emphasizes that these three objectives are interconnected and require a coordinated approach. A weakness in one area can jeopardize the achievement of others. For example, unreliable financial information (reporting objective) may lead to inappropriate strategic decisions (operational objective) or sanctions for non-compliance (compliance objective).

The COSO objectives serve as the foundation for designing, implementing, and evaluating internal control systems. By ensuring their achievement, organizations can strengthen their resilience, improve performance, and ensure their sustainability in a complex and constantly evolving environment.

2.3 COSO Components:

The COSO framework is based on five fundamental components that help structure and effectively evaluate an organization's internal control system. These interrelated and complementary components form the pillars of the COSO model.

Graph 01: The implementation of an internal control system



Source : <https://www.polonious-systems.com/how-to-implement-the-coso-framework/>

2.3.1 Control Environment

The control environment is the foundation of the internal control system. It reflects the culture, values, and ethical standards of the organization, as well as the commitment of leadership to sound governance. Key elements:

- Integrity and ethical values.
- Management style and leadership commitment.
- Clear and appropriate organizational structure.

- Human resource policies that promote excellence and compliance.

2.3.2 Risk Assessment

Risk assessment involves identifying, analyzing, and prioritizing the risks that may hinder the achievement of the organization's objectives. This component integrates emerging risks and the evolving internal or external environment. Key elements:

- Definition of measurable objectives.
- Identification of potential or real risks.
- Analysis of the probability and impact of risks.
- Development of appropriate response strategies (reduction, transfer, acceptance, or avoidance).

2.3.3 Control Activities

Control activities are policies, procedures, and actions implemented to mitigate identified risks and ensure compliance with established directives. Key elements:

- Segregation of duties to avoid conflicts of interest.
- Automation of processes to minimize human errors.
- Periodic checks and specific controls.
- Implementation of corrective action plane.

2.3.4 Information and Communication

This component ensures that relevant and reliable information flows effectively at all levels of the organization. Good communication is essential to ensure that all actors understand their roles in the internal control system. Key elements:

- Collection, processing, and dissemination of accurate and relevant data.
- Transparency of information both internally and externally.
- Establishment of secure and suitable communication channels.

2.3.5 Monitoring and Supervision Activities

Monitoring consists of continuously overseeing the functioning of the internal control system to ensure its effectiveness. This includes periodic evaluations of processes and updates to systems in response to internal or external changes. Key elements:

- Continuous monitoring by managers and teams.
- Periodic independent audits.
- Analysis of discrepancies and deficiencies identified.
- Adjustment of strategies and strengthening controls when necessary.

The five COSO components provide a robust and flexible framework for assessing, designing, and improving internal control systems. Their implementation enables organizations to effectively manage risks, strengthen governance, and ensure the achievement of their strategic objectives.

3. Limitations of Internal Control:

Although internal control is essential for ensuring the effectiveness and security of an organization's operations, it has certain limitations that must be considered. These limitations may arise from the design of the system itself, human factors, or external constraints.

3.1 Dependence on Human Resources

Internal control largely relies on the commitment, skills, and integrity of employees. Human errors, internal fraud, or lack of training can undermine the effectiveness of controls. For example, an employee who is poorly trained or negligent in implementing a control can reduce the reliability of the system. Limitations:

- Risk of negligence or fraud by employees.
- Difficulty in maintaining constant vigilance.
- Pressure to perform may sometimes lead to bypassing controls.

3.2 Cost and Complexity of Implementation

Implementing a robust internal control system requires significant financial and human resources. Small and medium-sized enterprises, in particular, may face budgetary constraints that limit their ability to implement a comprehensive internal control system. Additionally, as the organization grows, the internal control system must adapt, increasing the complexity and cost of operations. Limitations:

- Costs associated with setting up and maintaining the system.
- Increased complexity for large organizations or rapidly changing environments.
- Risk of inefficiency if the system is too rigid or complex.

3.3 Inability to Eliminate All Risks

By nature, internal control aims to reduce risks, but it cannot eliminate them entirely. Some risks, especially unforeseen external risks (natural disasters, sophisticated cyberattacks, economic fluctuations), fall outside the scope of internal control. Even the best control systems may not detect latent risks or emerging new risks. Limitations:

- Inability to identify all potential risks, especially those that are unforeseen or evolving.
- External risks and force majeure events that escape internal control.
- Risk of overestimating control capacity, leading to false security.

3.4 Inadequacy in a Constantly Evolving Environment

Organizations operate in a dynamic environment characterized by rapid changes, such as new technologies, regulations, or shifts in stakeholder expectations. The internal control system must constantly be updated to remain relevant, but this may take time and require significant adjustments. Limitations:

- The internal control system can become obsolete in the face of rapid market or technological changes.
- Difficulty in anticipating new risks related to innovations or regulatory changes.
- Lack of agility in quickly adapting to new situations.

3.5 Conflicts of Interest and Internal Fraud

Despite the controls in place, conflicts of interest and internal fraud remain persistent risks. For example, a decision-maker may deliberately bypass controls to benefit personally. Internal control systems cannot always detect these deviant behaviors, especially when they are well concealed. Limitations:

- Risks related to fraudulent behavior or malicious conflicts of interest.
- Difficulty in detecting sophisticated internal fraud, even with monitoring mechanisms.
- Limits in the ability to monitor interpersonal relationships and influences within the organization.

3.6 Limitations in Control Coverage

Internal control systems are often focused on specific processes or areas, which may leave some aspects of the organization uncovered. For example, financial controls may be more robust than controls in areas such as human resources management or physical security. Limitations:

- Lack of coverage in specific areas of the organization.
- Some processes may be less monitored or non-standardized, creating gaps in control.
- Priority given to certain functions may neglect sensitive or less visible sectors.

The limitations of internal control remind us that, while crucial for risk management, internal control cannot guarantee absolute protection. Organizations must understand these limitations and implement mechanisms for regular monitoring and re-evaluation. A balanced approach, combining internal control with other risk management devices and a strong corporate culture, is essential to strengthen the effectiveness of this system and minimize its weaknesses.

II. Conceptual Foundation of the Internal Audit Function:

1. The Reference Framework: The reference framework for internal audit defines the set of standards, principles, and practices that internal auditor must follow to successfully carry out their missions. This framework ensures consistency in the exercise of audit functions, while guaranteeing the effectiveness, objectivity, and compliance of the audits conducted. It is based on international standards while taking into account local and sector-specific specifics.

1.1 International Standards for Internal Auditing: Internal auditing is primarily guided by internationally recognized standards and frameworks, such as:

- **The Institute of Internal Auditors (IIA) and its Standards:** The IIA is the primary body that defines the standards and professional practices of internal auditing globally. These standards are structured around fundamental principles, attributes (competence and independence of internal auditors), and performance criteria for audit missions. The main IIA standards include:
 - **Independence and Objectivity:** Internal auditors must be independent and objective in their assessments, without external influence.
 - **Competence and Diligence:** The auditor must possess appropriate skills and must perform their work with the necessary rigor and expertise.
 - **Audit Planning and Execution:** Audits must be systematically planned, identifying key risks and ensuring the application of the most suitable methodology.
 - **Clear and Relevant Reporting:** Audit results should be reported clearly and structured, with specific recommendations for process improvement.
- **COSO (Committee of Sponsoring Organizations of the Treadway Commission):** Although primarily focused on internal control, the COSO framework is also essential for internal auditors when evaluating the effectiveness of control and risk management. It provides a systematic approach to assessing governance structures, risk management, and internal control.

1.2 Legal and Regulatory Framework: The legal and regulatory framework for internal auditing varies by country and sector. Organizations must comply with legal requirements related to internal auditing, whether national or international. For example:

- **Sarbanes-Oxley Act (SOX):** In the United States, this law imposes strict obligations on publicly traded companies, especially regarding internal control and financial statement certification, directly impacting the role of internal auditing.
- **Sector-specific Regulations:** In sectors such as banking, insurance, or energy, sector-specific regulations require specific internal audits to ensure compliance with governance and risk management rules.

1.3 Internal Audit Methodology: The reference framework for internal auditing also includes clear methodologies for carrying out missions. These methodologies typically follow a structured process with several steps:

- **Audit Planning:** Define the objective of the audit, necessary resources, scope, and associated risks.
- **Execution of the Audit Work:** Collect information, analyze processes, and identify weaknesses or risks. This step involves using suitable audit tools and techniques such as interviews, questionnaires, document reviews, and data analysis.
- **Audit Report Writing:** Present results clearly and objectively, with conclusions and recommendations tailored to improve processes.
- **Follow-up on Recommendations:** After delivering the report, the internal auditor must track the implementation of corrective actions and assess the impact of the changes made.

1.4 Roles and Responsibilities of Stakeholders: In the context of internal auditing, the roles and responsibilities of different stakeholders are clearly defined:

- **Audit Committee:** The audit committee is typically responsible for overseeing internal audit activities, validating audit plans, and monitoring audit results.
- **Operational Managers:** Although internal auditors are independent in their assessments, the cooperation of operational managers is essential for facilitating access to information and implementing recommendations.
- **Internal Auditors:** They are responsible for executing audits according to defined standards and methodologies, writing reports, and communicating results to relevant stakeholders.

1.5 Training and Professional Development: The reference framework for internal auditing also includes guidelines for ongoing training and the development of internal auditors. Auditors must maintain and improve their skills, including:

- **Acquiring Professional Certifications:** Certifications such as CIA (Certified Internal Auditor) or CISA (Certified Information Systems Auditor) are often required to ensure high-level expertise.
- **Pursuing Continuing Education:** To stay informed of updates to standards, regulations, and best practices.

The reference framework for internal auditing is essential for ensuring the quality, consistency, and effectiveness of audits within an organization. It relies on internationally recognized standards and practices while integrating local and sector-specific requirements. By adopting this framework, internal auditors can provide relevant and objective evaluations, strengthen governance, and help the organization achieve its strategic objectives while managing risks.

2. From the Internal Audit Function to the Internal Auditor Profession:

a. Definition of Internal Auditing: Internal auditing is an independent and objective activity that provides an organization with assurance on the control of its operations, offers advice for improvement, and contributes to adding value. It helps the organization achieve its objectives by systematically evaluating its risk management, control, and corporate governance processes and making proposals to enhance their effectiveness.

b. Objectives of Internal Auditing: Internal auditing has several key objectives, which can be divided into two main missions:

- **Assurance:** Provide an independent evaluation of the effectiveness of internal control systems, risk management, and governance. This includes verifying compliance with laws, regulations, and internal policies, as well as evaluating financial, operational, and strategic risks.
- **Advisory:** In addition to its assurance role, internal auditing also serves as an advisor to management and other stakeholders. Internal auditors identify opportunities for improvement and recommend corrective actions to strengthen processes and optimize organizational performance.

c. Role and Mission: The internal auditor evaluates processes within the organization, whether they are related to management, finance, operations, or compliance with ethical and regulatory standards. They ensure that these processes operate effectively and align with the organization's objectives. The role of internal auditing includes:

- **Risk Assessment:** Identifying and assessing risks that could prevent the organization from achieving its objectives.
- **Evaluation of Internal Controls:** Analyzing the effectiveness of controls implemented to mitigate or reduce identified risks.
- **Process Improvement:** Proposing recommendations to improve risk management, strengthen internal controls, and optimize the organization's performance.
- **Compliance:** Ensuring that the organization complies with applicable laws, regulations, and industry standards.

3. Internal Audit Standards According to IIA:

3.1 Definition: Internal auditing is performed in various legal and cultural environments, benefiting organizations of diverse size, complexity, and structure. It can be carried out by professionals, whether internal or external to the organization. Since these differences may influence the practice of internal auditing in each environment, it is essential to comply with the International Professional Practices Framework (IPPF) for internal auditing to ensure that internal auditors and the internal audit function fulfill their responsibilities.

3.2 Purpose of the Standards: The standards aim to:

1. Guide the application of mandatory provisions of the International Professional Practices Framework for internal auditing;
2. Provide a framework for carrying out and developing a wide range of value-added internal audit activities;
3. Establish evaluation criteria for internal auditing;
4. Promote the improvement of organizational processes and operations.

3.3 Types of Audit Standards:

3.3.1 Qualification Standards: Qualification standards in internal auditing define the skills, qualifications, and professional requirements that internal auditors must meet to effectively perform their role within organizations. These standards ensure that internal auditors possess the necessary knowledge, skills, and experience to conduct their missions professionally, independently, and in line with international best practices.

3.3.2 Operational Standards: Operational standards are a set of guidelines that govern how internal auditing should be conducted within organizations. These standards ensure that internal audit activities are effective, independent, objective, and add value to the organization. The operational standards of IIA are divided into various categories, covering the basic principles that should be followed throughout the internal audit process, from planning to reporting.

3.3.3 Implementation Standards: Implementation standards, defined by the Institute of Internal Auditors (IIA), are part of the IPPF and serve as a basis for executing internal audit missions within organizations. These standards specify operational requirements regarding how audits should be planned, executed, followed up, and reported.

4. Fundamental Principles for Auditors: Internal auditors are required to adhere to the following fundamental principles:

- **Behavior:** Auditors must demonstrate exemplary behavior in line with the qualifications of the internal audit profession.
- **Integrity:** The integrity of internal auditors is the foundation of the trust and credibility placed in their judgment.
- **Confidentiality:** Auditors respect the value and ownership of the information they receive and only disclose it when necessary and with appropriate authorization unless legally or professionally required to do so.
- **Competence:** Internal auditors use and apply the necessary knowledge, skills, and experience required to perform their tasks.
- **Objectivity:** Auditors demonstrate the highest degree of professional objectivity when collecting, evaluating, and communicating information related to the activity or process under review.

5. Strategic Importance of Internal Auditing: In an oil industry context, internal auditing contributes to:

- Protecting against fraud and financial losses.
- Ensuring compliance with national and international standards (e.g., ISA, environmental regulations, NAA).
- Optimizing complex and costly processes.

6. Key Steps for Implementing Internal Auditing:

6.1 Initial Needs Assessment: The first step is to analyze the existing control environment, identify key gaps, and assess the risks associated with Sonatrach's activities (e.g., hydrocarbon exploration, transportation, and distribution). This assessment involves a thorough review of information systems, operational processes, and organizational culture.

6.2 Identification of Strategic Objectives:

It is essential to define the objectives to be achieved by the internal audit function. These objectives include:

- Strengthening transparency in resource management.
- Minimizing the risks of non-compliance with regulations.
- Optimizing the performance of operational units.

6.3 Recruitment and Training:

Sonatrach must build a team of competent auditors, trained according to international standards, and capable of adapting to the specificities of the oil industry. Collaborating with specialized firms for continuous training can enhance this commitment.

III. The Internal Audit Function within Sonatrach:

1. The Intersection of the Internal Audit Function and Sonatrach:

1.1 Overview of SONATRACH: SONATRACH is a national company created to meet Algeria's long-term needs for hydrocarbons, both gaseous and liquid. Founded by Decree No. 63-491 of December 31, 1963, its main mission is to contribute to the financing and development of the nation, particularly by generating foreign currency through the commercialization of hydrocarbons.

As an internationally oriented company, SONATRACH operates in the oil and gas industry, a sector that is both strategically important economically and nationally. It strives to adopt international standards and strategies shared by its partners and competitors, while remaining true to its national objectives. This approach allows SONATRACH to leverage its international positioning to generate wealth and contribute to the country's development. The internationalization of SONATRACH's activities is crucial for the integration of the

Algerian economy into the global economy, making the company a key player in the global oil and gas sector. As an economic leader, SONATRACH must adapt to the challenges of international competition while strengthening its contribution to national interests. It is also responsible for the optimal exploitation and management of the nation's underground resources, which must be valued and preserved for current and future generations.

1.2 Deloitte's Support for Sonatrach: The partnership between Sonatrach and Deloitte aims to strengthen its internal audit processes, corporate governance, and financial control. This collaboration, established through an international tender process, introduced advanced methodologies and set up robust structures adapted to the complex needs of a company of Sonatrach's scale.

Deloitte contributed its expertise to various strategic initiatives, including modernizing risk management processes and governance. The main objectives of this collaboration were to ensure transparency, increase organizational efficiency, and ensure compliance with international standards in a global energy context marked by worldwide challenges and demanding regulations.

In addition to contributing to the development of internal audit frameworks and compliance strategies, Deloitte assisted Sonatrach in digital transformation projects aimed at optimizing its operations. Special attention was given to training and strengthening the leadership team's skills, particularly in risk management, governance, and sustainability. This work enabled Sonatrach to align its practices with international standards and attract more foreign investments.

The cooperation led to the delivery of specific outputs in 2006, helping Sonatrach structure its internal control system and adopt an internal audit function in line with international frameworks. These efforts consolidated Sonatrach's position as a leader in Africa's energy sector and as an influential player in international markets.

The exact cost of Deloitte's support for Sonatrach is not explicitly stated in accessible sources. However, such collaborations, involving complex structural reforms and long-term strategic support, typically represent significant investments, often in the millions of dollars, due to the nature of services provided by major international consulting firms like Deloitte. These services include internal audits, risk management, corporate governance, and digital transformation.

1.3 Organization of the Audit Function within Sonatrach: The Audit and Risk Department, in accordance with the requirements of standards, reports directly to the highest functional level of the company, the General Directorate, at the same level as the CEO's office.

It is organized into six specialized sub-departments:

1. Development, Quality, and Reporting: Responsible for ensuring the quality of audits and producing consolidated reports.
2. Exploration & Production (E&P): Focused on audits related to oil exploration and production activities.

3. Pipeline Transport (TRC), Marketing (COM), and Headquarters Structures: Responsible for auditing transport operations, marketing, and administrative activities.
4. LQS & RPC Activities: Related to logistics, service quality, and monitoring the performance of projects.
5. Audit of Costs in Upstream Oil & Gas Partnerships: Focused on auditing costs and partnerships in the upstream sector.
6. Risk Department: Responsible for developing a risk map covering all of Sonatrach's activities.
This organization aims to ensure comprehensive coverage of risks and close monitoring of critical processes for the company.

The larger the audited activity, the more the corresponding internal audit sub-department is staffed with a significant number of auditors to effectively address control and supervision needs.

2. Execution of an Audit Mission within Sonatrach:

1. Preparation Phase

The preparation of an audit mission is a crucial step in the process, as it lays the groundwork necessary for organizing and conducting the audit. This phase includes several key actions:

- **Selection of the audit team:** The team is selected based on the mission's complexity, available resources (time, personnel), and the specific expertise required to conduct the audit. The team typically consists of a supervisor, a mission leader, and at least two auditors.
- **Preliminary review:** The mission leader conducts a preliminary study to familiarize themselves with the key aspects of the audited entity. This involves collecting documents related to the processes to be audited, as well as reviewing existing procedures and prior audit techniques. This phase helps establish a framework for the audit.
- **Mission letter:** Before starting the audit, the Director of Audit informs the responsible entity 15 days in advance that an audit mission is scheduled. The letter includes essential information such as the audit's purpose, the expected duration (start and end dates), and the names of the involved auditors and mission objectives.
- **Risk table:** A risk analysis is conducted at the headquarters or in the field, often through interviews with the managers of various divisions, to understand the organization and functions of the audited services. This analysis breaks down activities into tasks, evaluates the risks associated with each task, and identifies possible consequences, taking into account existing internal control measures.
- **Guidance note:** This document defines the scope of the audit, the objectives to be achieved, and the specific areas to be audited. It also delineates the risk areas to examine and specifies the services or divisions involved in the audit.
- **Work program:** Based on the risk analysis, a detailed work program is developed to plan and track the auditors' activities. This program must be validated by the audit supervisor and the audit director before fieldwork begins.

2. Execution Phase

The execution phase focuses on carrying out the planned tasks and collecting information to meet the audit objectives:

- **Opening meeting:** At the start of fieldwork, an opening meeting is held to officially begin the mission. This meeting presents the audit charter, objectives, scope, and methodology to be used. The mission schedule is finalized, and the first meetings are arranged with the auditees.
- **Audit tests:** Auditors perform checks and gather relevant information to meet the mission's objectives. This includes interviews, physical observations, document analyses, and using audit tools such as diagrams and reconciliations. The results of these tests are recorded in formal documents such as Test Sheets (TS) and Problem Disclosure and Analysis Sheets (PDAS), which structure and document the conclusions.
- **Closing meeting:** Before leaving the site, a closing meeting is held between the audit manager and the auditors to verify that the objectives have been met and that the work program has been followed.

This meeting also allows for validating preliminary conclusions and obtaining initial agreement from the auditee on findings and recommendations. The results are documented in minutes.

3. Conclusion Phase

The conclusion phase includes drafting and validating the final report, as well as following up on corrective actions.

- **Draft report:** Ideally, the draft report is written during the mission, even before the closing meeting. It summarizes the audited entity's organization, the mission's objectives, findings, and recommendations. This document also includes a concise summary for decision-makers.
- **Validation meeting:** After drafting the report, a validation meeting is held with the auditees to discuss the conclusions and recommendations. This meeting allows for clarifications and obtaining the auditees' agreement on the observations and proposed corrective measures. The minutes of this meeting must be kept.
- **Feedback meeting:** Once the mission is completed, internal auditors meet with their director to discuss significant events and observations. This meeting assesses the audit's effectiveness, discusses positives and negatives, and plans the next steps.
- **Final report:** After the validation meeting and any necessary modifications, the final report is prepared. This report includes a summary of the results for leaders, detailed findings, and the recommendations register. The report is then sent to those responsible for corrective actions and to the general management.

4. Audit Follow-Up: After a minimum of six (06) months following the initial audit mission, a follow-up audit mission (RSA) is planned if the internal audit report was marked red. In this case, an audit team is sent to the audited entity to verify the implementation of recommendations.

Actions taken include:

- **Checking the progress of recommendations:** The auditor meets with the auditee to assess the implementation status of the recommendations.
- **Listing recommendations:** Recommendations are classified according to their status (completed, in progress, not completed).
- **Delivery of TEAPA (Updated Progress Action Tables):** The TEAPAs are provided to the auditee, who must complete them with the status of the recommendations.
- **Verifying implemented actions:** Tests are performed to ensure that the recommendations are effectively implemented, in progress, or not yet completed, with necessary supporting documents.
- **Analyzing delays and setbacks:** Auditors check the implementation timelines and request justifications for any delays.
- **Examining obstacles:** Reasons and difficulties related to non-implementation of recommendations are analyzed.

A follow-up audit report is then prepared, summarizing the actions taken, the status of recommendations (completed, in progress, not completed), the auditee's responses, and the audit's opinion.

5. Classification of the Audit Mission File: Each internal audit mission must be documented in a specific file, which is then archived in the Internal Audit Department's records. The audit file includes:

- The preparation file (documentation, meeting minutes).
- Fieldwork records (audit tests, interview notes, observations).
- The final report (draft report, final report).
- The follow-up report (for red-marked reports).

The classification of documents and audits is handled digitally to maintain proper traceability.

6. Specific Challenges at Sonatrach:

Implementing an internal audit function in a company of Sonatrach's scale is not without challenges. These include:

6.1 Internal Resistance to Change:

In such a large organization, resistance to change is a significant issue. Employees and managers may view internal audits as a threat or an intrusion into their activities, creating an atmosphere of mistrust. To address this, it is crucial to raise awareness among stakeholders about the added value of audits.

6.2 Operational Complexity:

Sonatrach operates in multiple segments of the oil industry, including exploration, production, refining, and distribution. These activities involve a multitude of processes, each requiring deep technical expertise to correctly assess the risks.

6.3 Regulatory and Environmental Constraints:

In Algeria, the regulatory framework is constantly evolving, particularly in the areas of hydrocarbon management and environmental protection. As such, the internal audit must quickly adjust to ensure compliance with new requirements while providing practical solutions to emerging challenges.

7. State of the Internal Audit Function at Sonatrach:

After nearly two decades of audit missions within Sonatrach, the internal audit function has made significant progress but has also revealed persistent challenges. Each year, each sub-department carries out an average of 25 audit missions, generating numerous reports and recommendations. This intensive work has improved risk management and better structured internal processes.

7.1 Significant Advancements:

• Modernization of Governance and Audit Practices:

Thanks to Deloitte's support, Sonatrach has aligned its internal audit and governance practices with international standards, enhancing professionalism and expertise. This process has contributed to improving transparency and addressing previous criticisms regarding resource management issues.

• Strengthening Internal Capacities:

Sonatrach has invested in developing its talent pool by recruiting high-potential professionals, providing them with appropriate training, and enabling them to grow within the company. This strategy has proven successful, as it has strengthened the teams' expertise in risk management and compliance.

• Continuous Improvement:

Sonatrach's internal control system is constantly evolving, with the adoption of new procedures and standards. These reforms have allowed the audit function to better manage the major risks identified in the risk mapping.

7.2 Challenges and Limitations:

• Failure to Detect Certain Irregularities:

Despite these advancements, criticisms have emerged regarding the failure to detect major financial irregularities in the past. These incidents highlighted gaps in the implementation or follow-up of recommendations, underlining the need for strengthened controls to ensure the effectiveness of audits.

• Persistent Challenges in Operational Effectiveness:

Sonatrach continues to face challenges in operational efficiency and the fight against corruption. This demonstrates that organizational transformation is a complex and lengthy process that requires constant adjustments.

7.3 Added Value and Overall Impact:

- **Although notable progress has been made, it remains difficult to precisely measure the financial or operational impact of the audit missions.** The benefits are primarily qualitative, such as enhancing the company's credibility, reducing risks, and improving Sonatrach's reputation on the international stage.
- **Sonatrach's annual reports reflect its commitment to continued improvement efforts.** However, to ensure the lasting impact of these reforms, rigorous follow-up and continuous adaptation of practices are necessary.

Conclusion:

Every company, regardless of size, must establish verification mechanisms tailored to its specific needs. For small organizations, this might involve simple controls, while larger ones require more complex audits. The main goal of these practices is to ensure organizational efficiency, the reliability of information, and operational compliance.

This analysis has emphasized the essential role of internal auditing, particularly in evaluating and improving internal control systems. By ensuring the proper application and effectiveness of procedures, internal auditing plays a key role in optimizing organizational processes, providing valuable advice and recommendations.

Internal auditing also plays a critical role in risk management. It helps identify, assess, and monitor major risks that could jeopardize the achievement of the company's strategic objectives. This proactive approach is indispensable for ensuring the sustainability and resilience of operations.

Moreover, internal auditing is essential for any organization. It promotes more rigorous management of processes, ensures the application of procedures set by the management, and enables optimal functioning of services. Therefore, it is essential for companies aiming to improve their performance and efficiency not to underestimate the internal audit function.

In the case of Sonatrach, the implementation of the internal audit function is a strategic approach. By adopting a structured approach aligned with international standards and addressing the specific challenges of the oil industry, Sonatrach can strengthen its governance and improve its risk management. This strategic lever would enable it not only to consolidate its position in the market but also to better navigate economic turbulence and increasing regulatory requirements.

The collaboration with Deloitte has added significant value, particularly in modernization, capacity building, and compliance. However, the persistent challenges Sonatrach faces reflect the incomplete nature of the transformation. To optimize the benefits of this initiative, it is essential to conduct thorough follow-up on recommendations and continuously assess the progress made.

Bibliography

- Delloit. (2006). *Internal Audit Manual Sonatrach*. Algeria.
- GOUTTEBEL, J.-Y. (2003). *Territorial Development Strategy*. Paris: Economica.
- IFACI. (20/05/2014). *COSO - Integrated Internal Control Framework*. Paris: Eyrolles.
- Labareyre, F. G. (10/06/2010). *Cobit, For Better Governance of Information Systems*. Paris: Eyrolles.
- Pesqueux, Y. (2018). *ISO 31000 v 2018 FR - Risk Management*. VIENNA: AFNOR.
- Renard, J. (1995). *Theory and Practice of Internal Audit*. Paris: Eyrolles.
- SONATRACH. (2024). *SONATRACH | Energy for Sustainable Development*. Retrieved from <https://www.bing.com>