

INTOSAI



Compliance Audit  
Subcommittee

**Annual Newsletter of the INTOSAI  
Compliance Audit Subcommittee**

# INTOSAI Compliance Audit Subcommittee Annual Newsletter 2022

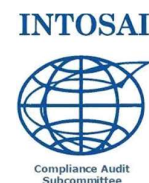
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## From the Editor's Desk

*My dear colleagues,*

*I am delighted to present the 2022 edition of the Compliance Audit Subcommittee Newsletter. I hope this year finds you safe and healthy. In this newsletter we present a brief overview of the activities of the Compliance Audit Subcommittee during the past year.*

*It also features articles from the INTOSAI Development Initiative, the State Audit Office of Hungary, the Chamber of Accounts of the Republic of Azerbaijan, the Indian Audit and Accounts Department and Centre for Data Management and Analytics of SAI India. These contributions reflect how our community of public auditors has attempted to innovate compliance audit practices for improvising the delivery of public services by various governments.*

*I am positive that these contributions shall be of great benefit to the INTOSAI Community. Let me place on record my sincerest admiration for the contributors for bringing to the INTOSAI Community their experiences, ideas and insights. I would like to thank all members of CAS, our observers, the IDI and our partners within the INTOSAI community for their continued support and cooperation during the past year.*

*Wishing all of you good health and happiness.*

*Best regards,*

**Meenakshi Sharma**

Additional Deputy Comptroller & Auditor General and  
Acting Chair  
Compliance Audit Subcommittee

## Brief Overview of CAS Activities

### 18th Annual CAS Meeting

The 18th Annual Meeting of the INTOSAI Compliance Audit Subcommittee (CAS) was held virtually on 28 October 2021. The meeting was hosted by the Supreme Audit Institution (SAI) of India, Chair of CAS. Representatives from member SAIs, CAS observers and the INTOSAI Development Initiative participated. The meeting was inaugurated by Mr. Girish Chandra Murmu, Comptroller & Auditor General of India, in his capacity as chair of CAS.



### Mr. Girish Chandra Murmu inaugurates 18<sup>th</sup> Meeting of CAS

Mr. Murmu, in his opening remarks, pointed out that the impact of compliance audit goes beyond plugging leakages in Government expenditure and saving funds to improving public accountability and transparency. Compliance to rules and regulations, he said, is a necessary prerequisite for strong and stable institutions and efficient and effective implementation of policies and programmes and ensures accountability in governance. He touched upon the efforts of Supreme Audit Institutions in conducting compliance audits of COVID-19 related initiatives which have helped, on the one hand, their respective governments in streamlining and improving their pandemic management strategies and making mid-term adjustments, and on the other, the SAIs themselves in reassessing their strategies and methods in conducting audits under changed circumstances. Referring to the increased dependence on digital modes of auditing and communication, he suggested that in

some ways the procedures for conducting audits have changed for the better. He appreciated the resilience shown by SAIs as also the efforts of IDI to support the SAI community through their timely initiatives.



**Mr. Girish Chandra Murmu addresses members of CAS**

Mr. Murmu proposed that the 3I approach – innovating, institutionalizing and integrating – may be an ideal strategy to address the major challenge of capacity building. Innovating through the adoption of digital technology, for example - employing the possibilities of e-learning for expanding technical expertise among auditors, institutionalizing the framework of standards and guidelines, and integrating compliance audits to the broader auditing process. He thanked the participants for their continued cooperation and immense contribution to the activities of CAS and expressed his confidence that this global engagement will effectively improve governance across the world. He ended his speech with a quote by Jonas Salk, that the ‘reward of work well done is the opportunity to do more’.





**Ms. Meenakshi Sharma presents CAS Report**



**Participants from SAI India**

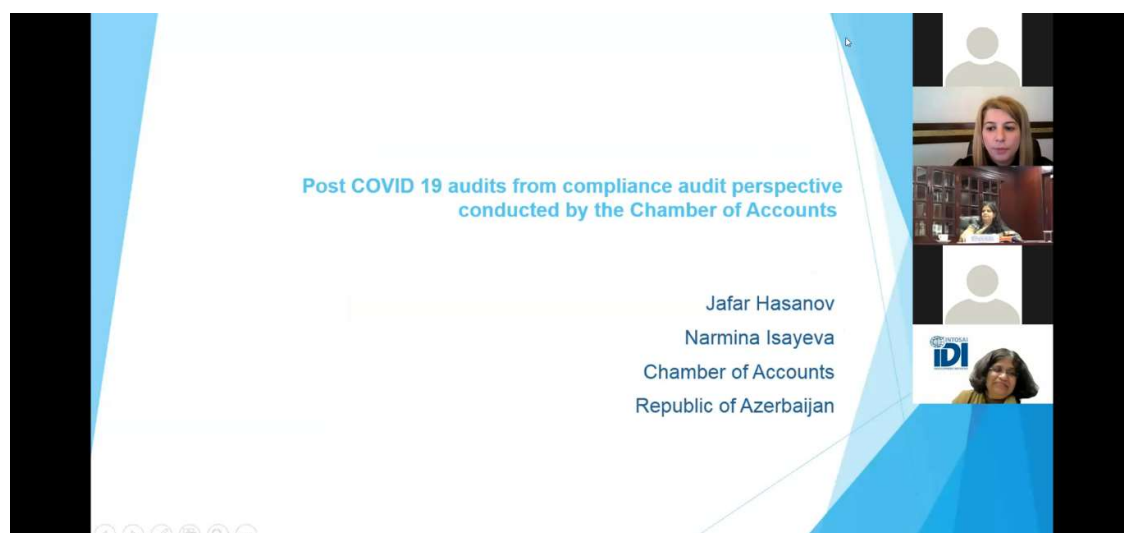
The meeting saw presentations by the INTOSAI Development Initiative on the IDI initiatives related to compliance auditing, SAI Hungary on “Applying compliance principles with respect to the challenges of the pandemic and the opportunities of digitalization”, SAI Azerbaijan on “Post COVID-19 Audits from compliance audit perspective conducted by the Chamber of Accounts of the Republic of Azerbaijan” and SAI India on ‘Compliance Audit Strategy and Methodology with reference to Public Health Management System’.



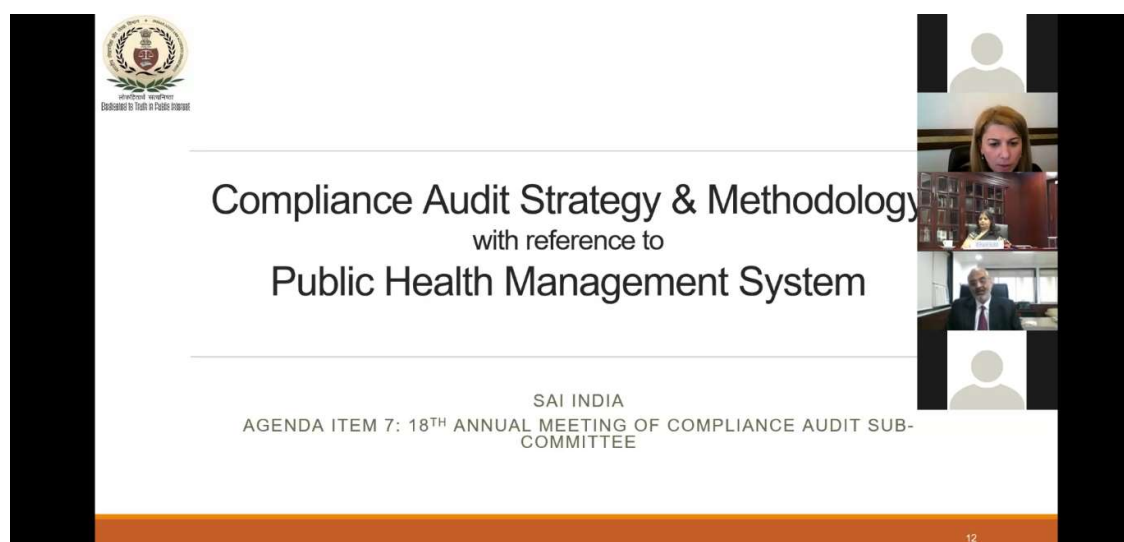
Presentation by IDI



Presentation by the State Audit Office of Hungary



### Presentation by the Chamber of Accounts of the Republic of Azerbaijan



### Presentation by the Indian Audit and Accounts Department

#### *Other Activities*

The Compliance Audit Subcommittee is participating in the SDP 2017-19 projects 2.5 (**Consolidated and improved guidance on understanding internal control in an audit**) and 2.6 (**Consolidated and improved guidance on reliance on the work of internal auditors**) led by the Internal Control Subcommittee. The former project is in its research phase, and the project proposal is to be updated factoring in insights from the Component 1 exercise.

The Guidance on Cooperation with Internal Auditors (Project 2.6) covers the aspects of cooperation and coordination between external and internal auditors, outlining the benefits and risks involved in such modes of cooperation as reliance, usage, direct assistance, etc. It also identifies ways to review the internal audit function.



The **CAS Newsletter 2021** was brought out in June 2021. The Newsletter reported on the progress of CAS initiatives during the past year in areas of knowledge development, capacity building and collaboration with INTOSAI partners. It also carried two articles from SAIs of Azerbaijan and Hungary on 'Combined Performance and Compliance Audits' and 'Monitoring based Audits: Strong Response to New Challenges' respectively.

CAS also actively participated in the final phases of the **Component 1 exercise** undertaken by PSC as part of SDP 2020-22. The project is currently in its final stages and the insights from the same is expected to inform the formulation and content of the next SDP.

PSC has undertaken the project of **revision of ISSAI 140** (Quality Control for SAIs) in response to the implementation of the new/revised suite of IAASB quality management standards (ISQM1 and 2, replacing ISQC1). An ad hoc working group was formed to undertake this project led by Ms. Bogna Kuczynska from the European Court of Auditors. The project is undertaken with the following aims:

1. Revise the content of ISSAI 140 to bring it in line with ISQM1
2. Explore and potentially propose ways to update the presentation of ISSAI 140 in line with the rest of the framework, helping ensure it is as clear and useful as possible.

The following CAS members have joined the ad hoc working group

1. Ms. Ingvild Gulbrandsen: Special Advisor, SAI Norway
2. Ms. Eniko Czinder: Head of Quality and Methodological Department, SAI Hungary
3. Ms. Katalin Palyi – Auditor, SAI Hungary
4. Ms. Chanda Pandit (Director General), SAI India
5. SAI France

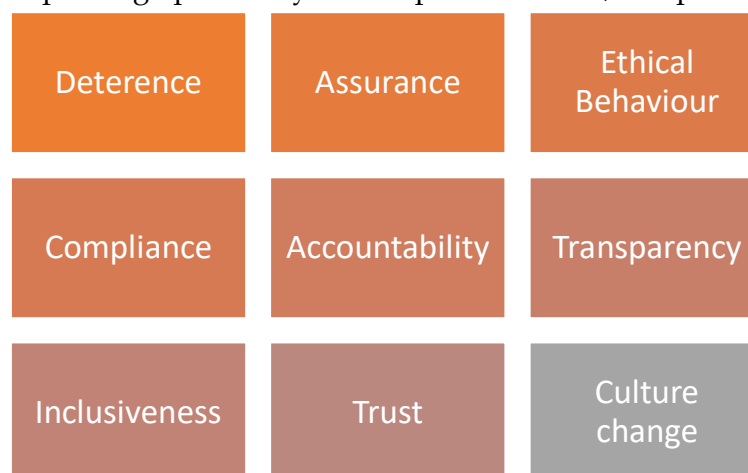
## Value & Benefits of compliance audits – IDI reflections

### INTOSAI Development Initiative

With the launch of the Facilitating Audit Impact initiative in 2020, IDI began its reflections on SAI contribution to audit impact and the delivery of value and benefits. We spoke with a number of SAIs and key stakeholders about their understanding of SAI audit impact as well as success factors leading to such impact. We also reflected on the unique value that each type of audit brings to the overall audit impact of the SAI. In this article we would like to share our reflections on how compliance audits deliver value for all and contribute to audit impact. We would also like to reflect on some key success factors that facilitate such impact.

Let us start with a description of IDI's understanding of audit impact. We understand audit impact as the contribution of the SAI's audit work to positive effects on people and the planet (a society/on a group/area), especially those left behind or at risk of being left behind. Recognising that many actors and factors influence impact, our focus is on contribution rather than attribution. We believe that SAI audits can have a number of positive effects. Speaking specifically of compliance audits, the positive effects of such audits

can include their deterrence value through adequate coverage, independent assurance on compliance through attest engagements, helping the representatives of the people in holding governments to account through high-quality compliance audit reports in the public domain, audit conclusions and recommendations contributing to ethical behaviour and more transparent, accountable and inclusive compliance frameworks, decision making and greater compliance with applicable authorities by those charged with governance.



**Figure 1: Benefits of Audit**

### *Compliance audits promote transparency*

Transparency can be defined as the basic and commonly agreed-upon principle of disclosure to make policies, legal and institutional frameworks and information related to decisions available to the public in a comprehensible, accessible and timely manner. Through compliance audits SAIs can ascertain if audited entities comply with transparency requirements. While publication of SAI's compliance audit reports leads

to greater transparency, executive action on the recommendations made by the SAI lead to more transparent compliance systems in the longer run.

*Compliance audits help the citizens in holding to account those charged with governance and improved accountability mechanisms in the public sector.*

Accountability is about the relationship between the State and its citizens, and the extent to which the State is answerable for its actions. The concept of accountability refers to the legal and reporting framework, organisational structure, strategy, procedures, and actions to help ensure that every organisation that uses public money and make decisions that affect people's lives can be held responsible for its actions. The principles and concepts necessary to public sector accountability include transparency, fairness, integrity, and trust. Compliance audits can ensure accountability by having a deterrent effect through adequate and regular oversight on compliance with authorities, compliance audit reports can help citizens, in holding those charged with governance to account and action on compliance audit conclusions and recommendations will lead to more accountable systems and actions by government in the future.

*Compliance audits promote inclusiveness*

Besides contributing to transparency and accountability, compliance audits can also contribute to inclusiveness. Compliance auditors can check if the authorities, rules and regulations that provide for inclusion in different areas are complied with by those charged with governance. For example, compliance auditors can check if the socio-economic scheme for beneficiaries from vulnerable groups is being implemented as per requirements and that the beneficiaries are genuine. Compliance audits can also comment on the extent to which inclusion considerations find place in compliance frameworks of the government.

*Compliance Audits contribute to ethical behaviour*

Behaving ethically in all situations is a core value for everyone, especially those charged with governance. Compliance audits contribute to enhanced ethical behaviour in the public sector by providing oversight on the extent to which decisions are made in compliance with the requirements of applicable code of ethics and making recommendations for improving compliance frameworks for ethics.

*Compliance Audits contribute to the fight against fraud and corruption*

Compliance audits have both preventive and detection value in case of fraud and corruption in public institutions. SAIs can build red flags, assess vulnerability of compliance systems and test actual compliance to detect instances of fraud and corruption. Depending on their mandate and capacities, SAIs can work together with

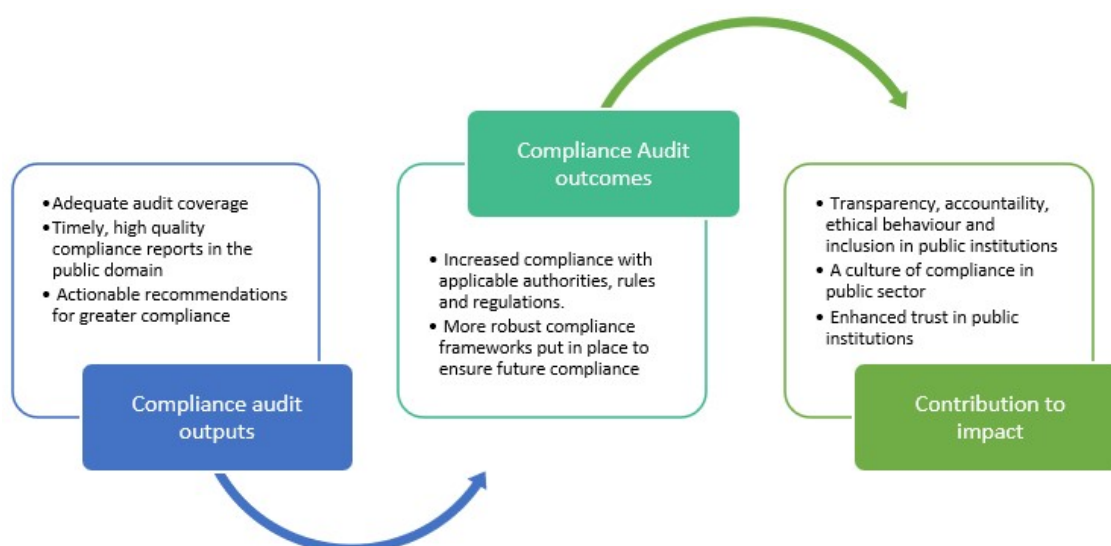
anti-corruption agencies, handover their findings to other authorities for further investigations or conduct such investigations themselves.

### *Compliance Audits contribute to creating a culture for compliance*

As mentioned earlier, adequate compliance audit coverage, high quality compliance audits and follow up and executive action on instances of non-compliance can in the long run contribute to greater awareness of the importance of compliance, act as a deterrent for non-compliance and facilitate a more complaint culture in government institutions.

By looking at transparency, accountability, inclusiveness and ethical behaviour across different sectors – public health, education, infrastructure, technology, environment etc compliance audits contribute to value and benefits for both people and planet.

We can also examine the value and benefits of compliance audits from the perspective of a *value chain* of outputs, outcomes and contribution to impact. The diagram below shows some illustrations.



**Figure 2: Compliance Audit Value Chain**

This value chain leading to value and benefits for all works on certain assumptions of enabling SAI independence and mandate, adequate SAI resources and capacities, robust audit methodology, supportive stakeholders, SAI ability to follow up and audited entities that take action on SAI recommendations. The delivery of value is compromised if any of the links in the chain or the assumptions don't work. This value chain is further affected by the political, social, economic cultural environment in the country as well.

### *What does it take to deliver value and benefits through compliance audits?*

In this section we would like to reflect on some SAI actions that can enhance the value and benefits of compliance audit

#### *Strategize to enhance compliance audit impact*

SAIs need to think strategically about the impact that they want their compliance audit work to deliver. At the SAI level and the individual compliance audit engagement level, this involves a clear vision of the impact, formulated after wide stakeholder conversations to ascertain expectations, scanning horizons to ascertain emerging trends, assess risks and significance of the trends, determine what will keep the SAI relevant and mobilizing resources to get the work done, thinking audit impact is not something that starts after the compliance audit is completed. Strategizing for compliance audit impact requires actions throughout the audit process, right from planning the audit to follow up actions.

#### *Form powerful coalitions for compliance audit impact*

SAIs cannot deliver compliance audit impact by themselves. Achieving value and benefits through compliance audits is a complex process. It requires several actors, both state and non-state, as shown in the diagram. To contribute and deliver value, a compliance auditor needs to scan the ecosystem in which she/he operates and determine the actors and processes that need to be engaged with throughout the audit and form powerful coalitions. This action would require strong participation of SAI leadership, ability to identify key stakeholders, reaching out to and engaging with stakeholder throughout the audit process, communicating to



**Figure 3: Value & Benefits for All**

create a common vision of impact and the value of SAIs audit work. Audited entities,



legislative bodies, civil society organisations, media, citizens, anti-corruption agencies could be some of the key stakeholders to consider reaching out to for forming such a coalition. The coalition could bring new insights into the compliance audit process, provide alternate sources of information and data, create advocacy and positive influence for SAI's compliance audit work. For the relationship to work, SAIs need to think beyond providing and receiving information to a true cooperation and working together based on mutual trust. In building such coalitions it is important to be inclusive and ensure that those that may not have a voice are included and heard.

### *Clarify expected action and robust follow up*

Both the IDI/IBP report shows that the weakest component of the oversight ecosystem is executive responses to audit findings (13 out of 100).<sup>1</sup> The 2020 Global Survey data shows a sharp decrease, from 86% in 2017 to 65% in 2020, in the SAIs internal system to follow-up on the observations and recommendations made to the audited entities in financial, performance and compliance audits. These weaknesses can also be observed in OBS data where independent follow-up, as part of the audit and oversight ecosystem, has a global average of 28 of 100. Given the negative developments reported on follow-up systems by SAIs, these low figures on consultations with and follow-up of Executive responses, suggest that impact of audit results will not improve as long as follow-up of audits is not prioritised by SAI as a way of holding the Executive accountable.<sup>2</sup> We believe that extensive communication and consultation with the audited entity throughout the audit process, use of coaching techniques, involvement of the audited entity in formulating realistic recommendations, clarifying expected corrective action and strong follow-up would enhance the chances of implementation of audit recommendations leading to audit impact.

We have also seen good examples of SAIs leveraging on technology for timely, transparent follow up. e.g., use of electronic dashboards, databases of audit recommendations etc.

### *Quantitative and Qualitative measurement & reporting on compliance audit impact*

Closing the loop, it is important for the SAI to visualize what success looks like by determining the manner in which the SAI will measure the contribution of compliance audit work to impact. A SAI can adopt both quantitative as well as qualitative measures. SAIs can report on their compliance audit impact as a part of their annual reporting. Many SAIs report on measures like % recommendations accepted and implemented by the audited entities, money recovered at the instance of audit,

<sup>1</sup> <https://www.idi.no/elibrary/reports/1096-all-hands-on-deck-harnessing-accountability-through-external-public-audits/file>

<sup>2</sup> Global SAI Stocktaking Report 2020

<https://www.idi.no/elibrary/global-sai-stocktaking-reports-and-research/2020-global-sai-stocktaking/1364-idi-global-sai-stocktaking-report-2020/file>

changes in compliance frameworks, corrective action taken, people held to account for noncompliance etc.

Following IDI initiatives will support SAIs in enhancing the value and benefits of compliance audits –

- **Facilitating Audit Impact** : This initiative can support compliance audit impact through its sub initiatives related to planning for impact, robust follow up mechanisms and strong stakeholder coalitions
- **Cooperative Compliance Audits**: Currently IDI is supporting a global cooperative compliance audit on Transparency, Accountability and Inclusiveness in the use of emergency funding for COVID-19 (TAI Audits). As a part of its support to SAIs, IDI has mainstreamed impact considerations in the TAI audit framework (<https://www.idi.no/elibrary/professional-sais/tai-audit/1212-tai-practical-guide/file>) and will support SAIs in developing action plans for facilitating audit impact.
- **Professional Education for SAI Auditors Pilot (PESA-P)** – This pilot includes professional capacity development on facilitating audit impact of compliance audits.

Please write to us at [idi@idi.no](mailto:idi@idi.no) to learn more about IDI's efforts to support SAIs in enhancing the value and benefits of compliance audits.

## Post COVID 19 audits from compliance audit perspective conducted by the Chamber of Accounts of the Republic of Azerbaijan

### *Chamber of Accounts, Republic of Azerbaijan*

The expansion of a new type of coronavirus infection spreading in the world from the beginning of 2020 has led to a sharp increase in the number of cases of this disease in our country. This necessitated the expansion and strengthening of appropriate preventive measures to prevent the disease. Based on the above-mentioned measures, with the application of a special quarantine regime in the country, work regimes in trade, tourism, catering, etc. were formed at intervals covering a certain period based on special rules, and social isolation of the population was carried out.

The Government has adopted an "Action Plan" which consists of 3 parts viz., **support for economic growth and entrepreneurship, employment and social welfare support, and macroeconomic and financial stability.**

During the quarantine regime, measures to support employment and social welfare were taken in several directions. One of these directions is the "payment of a lump sum to those registered as unemployed"

Thus, in accordance with the Government Resolution "On approval of the terms and conditions of the lump sum payment to the unemployed registered in connection with the introduction of a special quarantine regime during the coronavirus (COVID-19) pandemic" in April-August and December, 2020 persons registered as unemployed in areas where a special quarantine regime was applied were provided with the lump sum payment.

*Table 1: Information on months of lump sum payment and persons provided with payment*

Period	Number of people provided with lump sum payment
April	600 000
May	585 497
June - July	282 808
August	271 668
November	96 587
December	512 206
<b>Total</b>	<b>2 348 766</b>

A total of 448.0 million Manat was spent to finance the lump sum payment.

One of the measures taken to support employment in accordance with the government's decision is the organization of "paid public works." Due to this, there was a decrease in the number of unemployed in the following months.

Additionally, the Chamber of Accounts of The Republic of Azerbaijan joined the IDI TAI Audit Program, and within the program "Compliance Audit on the implementation of the Government Resolution on "The payment of tuition fees for the students who are the members of the families belonging to socially vulnerable groups" is planned. Audit program was drafted and approved by the Supervisor.

During COVID-19 Pandemic the Ministry of Education of the Republic of Azerbaijan, according to the relevant normative legal act, finances the educational expenses of students studying in higher, secondary specialized, and vocational education institutions, who are the members of families belonging to socially vulnerable groups at the expense of the state budget.

According to the Government Resolution on "The payment of tuition fees for the students who are the members of the families belonging to socially vulnerable groups" during the coronavirus (COVID-19) pandemic, tuition fees of the students who study full-time (except for second (repeated) higher and secondary special education) on a paid basis during the normative education in educational institutions and are members of families belonging to the relevant socially vulnerable groups for the semesters of 2020 were paid by the Government.

According to the decision, the semester expenses of the family members of the following vulnerable groups were financed by the state:

1. Recipients of targeted state social assistance;
2. Both parents (and in the case of a single parent) or their legal representatives belonging to any of the following categories:
  - 2.1. Persons with I and II degree disabilities;
  - 2.2. Those registered as unemployed;
  - 2.3. Labor pensioners by age;
  - 2.4. Recipients of age-related social benefits.

According to the information provided, in the second semester of the 2019-2020 academic year, 15,209, and in the first semester of the 2020-2021 academic year, 15,900 applications were submitted and tuition fees of a total of 20,800 students were financed by the Government.

Of the 20,800 students whose applications were approved for a single semester, the number of beneficiaries for one semester was 10,491 and 4,900 of them benefited from the privilege in the second semester of the 2019-2020 academic year and 5,591 in the first semester of the 2020-2021 academic year. The number of beneficiaries in both semesters is 10309.

In the second semester of the 2019-2020 academic year, 12,327 applicants were at the higher education level, 2,546 at the secondary special education level and 341 at the vocational education level. In the first semester of the 2020-2021 academic year, the figures were, respectively, 12,568, 2,763 and 569 applicants.

Based on the initial analysis conducted during the audit planning, risks such as deficiencies and deviations in the following areas are likely to occur:

1. Availability of information related to the Socio-Economic Packages (SEP) to the public in comprehensible, accessible and timely manner;
2. Lack of satisfactory level of accountability of the existing framework for public;
3. Leaving behind the students who are members of some families belonging to socially vulnerable groups while paying tuition fees for the semesters by the government

The audit will seek to answer the following questions:

#### *Transparency*

1. Is selection criteria for the payment of tuition fees for semester and information on it accessible and comprehensive?
2. Was information related to the decisions made on Socio Economic Packages available to the public in a comprehensible, accessible and timely manner?
3. Is financial information regarding the SEP (budget, source of funds, application of funds, transfer of funds between different entities, reporting on the use of those funds) published in an easily accessible and timely fashion?

#### *Accountability*

1. Did the individuals, benefitting from Socio Economic Packages meet the eligibility criteria indicated in the applicable laws and regulations?
2. Is expenditure information (related to SEPs) accurate at both commitment and payment stages?

#### *Inclusiveness*

1. Is the SEP framework inclusive? Does it provide equal opportunity and access, including to the vulnerable and marginalized groups?
2. To what extent have the planned SEP benefits reached those that they were intended for, including the marginalized sections?

The audit is currently underway. Information regarding the payment of tuition fees for the students who are the members of the families belonging to socially vulnerable group was received from the Ministry of Education of the Republic of Azerbaijan. The documents on the payments of tuition fees to relevant students were requested from another Ministry in order to compare the databases. Further audit process shall be conducted after the databases are compared and audit conclusions are drawn



## *A way to increase coverage among compliance audits*

### *State Audit Office, Hungary*

In 2021, the State Audit Office of Hungary performed a much broader range of auditee assessments than in previous years, and a larger number of auditees received feedback on their experiences in a short timeframe, in order to improve the public finance situation as quickly as possible. The scale of this is shown by the fact that only in 2021, the SAO was present at nearly 8,500 audited organisations with its new monitoring-based audit based on the compliance audit methodology. This is due to the methodological and digital developments at the State Audit Office in recent years, which have allowed the SAO to increase its efficiency and expand its audit coverage in compliance audits without creating an additional burden for the auditees.

### *Background*

First of all, we would like to underline that the State Audit Office considers the INTOSAI Auditing Standards as the guiding standards for the development of its audit standards, taking into account the constitutional and other domestic legal requirements and internal regulations applicable to its operations. As a consequence, **the structure and hierarchy of the professional regulations of audit at the State Audit Office follow the structure and designated content of the professional regulatory system of the international organisation.**

The past year and a half has shown that events can happen that take us by surprise and that we try but fail to prepare for them completely. The COVID-19 pandemic and economic and operational changes have brought new risks, which in many cases have been accompanied by the broadening of the audit and other areas of action of the supreme audit institutions. In addition to **communicating without personal contact during the audits, which is particularly important in the current situation due to the virus, and reducing the workload of the audited organisations, the SAO's focus remained on increasing the effectiveness of the audits.**

### *Methodological developments: monitoring-based audits*

**Structural improvements have recently been made in the area of compliance audits which have had a significant impact on the effectiveness of the audits of the State Audit Office and thus on the utilisation of the audit results.** These include **the operation of a system for receiving data that is less burdensome for the audited organisations, which was already in place before the coronavirus situation as a result of the SAO's digitalisation, and the definition of the relevant documents to be used for audits.**

This has led to a change in the approach to auditing, with **a gradual focus on aspects such as a significant reduction in the time required for implementation, as well as an increase in the efficiency of audits and the need for audits to individually cover auditee groups, with a small number of designated sets of documents to be assessed.**

This has led to the development of a new approach to auditing by the State Audit Office, which, **based on the methodological foundations of compliance audits, provides an up-to-date 'snapshot' of the auditee group on the basis of a small number of relevant audit documents.** Monitoring audits thus provide support for improving the public finance situation of the auditee through real-time assessment, focusing on the relevant documents of the current situation, based on prioritised criteria, and with recommendations for the future.

With these audits the SAO is **able to assess** the essential areas of good governance, accountability and transparency in **several audited organisations at the same time.** The SAO detects deficiencies by identifying the existence of basic conditions in different areas of operation and management and supports the improvement of the management of public funds and assets through feedback. The monitoring-based audit is **based on the compliance audit methodology, which is conducted on a predefined subject matter, and predefined criteria, as well as obtains sufficient and appropriate evidence to support the auditee's performance against the relevant criteria and ensures the concerning compliance.**

Another major advantage of the monitoring type audit, besides being in line with the audit objectives of the State Audit Office, i.e. to increase the coverage of audits, to assess in real time the segments not yet audited, to support the audited organisations, thereby enhancing the SAO's activities and promoting the functioning of "good-governance", is that **it is also beneficial for the audited organisations.** This includes the fact that, even during the COVID-19 pandemic, **contactless data request** is ensured, and **only the most important documents are requested** as a result of the methodological development, **thus reducing the burden on the auditees** and providing them with **faster feedback than ever before** in order to correct errors as quickly as possible.

### *Continuous digitalisation to support audits*

We believe that, as technology evolves, **the conscious and effective use of digital tools is increasingly the way forward for all supreme audit institutions.** Innovations, in particular the various technical and technological solutions, offer outstanding opportunities for their use in auditing activities. The SAO is also committed to digitalisation and is constantly looking for forward-looking solutions to support its efficiency.

The methodological developments described above were of course preceded by years of digital development, and **the monitoring type audits involving a large number of auditees have further reinforced the SAO's commitment to continuously explore and exploit the further opportunities offered by digitalisation.** The parallel audits, involving up to several thousand auditees, posed challenges in terms of both the way in which the large number of audit documents are processed and the quality assurance adapted to this, to which the SAO has responded with the following digital tools.

According to surveys, only one-fifth of the usable amount of information exists in the form of structured, i.e. systematized information in databases, and the remaining 80 percent appears as unstructured information. In case of supreme audit institutions,

most of the unstructured data is in text format. Text mining solutions, such as **a software used by the State Audit Office, can make this large amount of information interpretable and analysable**. Using such solutions, we can carry out searches, filtering and categorization of information from a large number of documents, based on their contents, and according to complex logical conditions, and can automate certain sub-processes and tasks of our audits.

It is important to note that quality assurance is also provided by the software robot performing the task: it follows the rules that are defined for it during the implementation of the automation. It is easily scalable, thus ensuring flexibility of operations and quick adaptation to changes. Efficiency is thus supported by the automation of certain (sub) processes of audits, which lead to that significant resources are saved and the operational time required for implementation is also shortened.

The technological, quality-assured audit process is also supported by **the software used by the SAO to answer the questions of the worksheet related to the audit**. Here, according to the principle of process organization based on the Lean Methodology, audit tasks are designed in the software in such a way that it enforces error-free implementation. Controls are thus integrated into processes as automated or preventive controls. Ex-post reviews and controls are detrimental to efficiency in this approach, as the process is prolonged and additional resources are required. The aim is therefore to perform the task or activity in the shortest possible time and with the minimum possible resources, in order to ensure the error-free implementation for the first try with the highest accuracy and ratio.

## Horizontal Audit of Public Health Infrastructure and Management Services undertaken by SAI India

SAI India

### *Introduction*

Public health issues are complex. At a minimum these issues encompass two angles – the human and the economic. At the human level the issue is universal and affects everybody but its impact is felt unevenly across gender, ethnic, age and income levels. The economic impact is felt at the levels of employment, economic growth and trade. When people fall ill, it affects their capacity to work and earn a livelihood. Loss of work hours due, for example, to large scale public health crises like the recent pandemic, also expands to a national level where it has an impact on trade, and by extension, economic growth.

Supreme Audit Institutions have a mandate and duty to audit the health sector. The approach to audit, for a SAI, is largely dependent on whether the health sector of that country is primarily funded publicly or privately. Where it is publicly funded, compliance audit becomes crucial, and complex, because of the large administrative and regulatory framework that is involved. The existence of significant private funding in the sector, on the other hand, limits the SAI to an examination of whether there is an accountability mechanism.

### *Audit of Public Health Management*

A robust healthcare management system is entirely dependent on availability of funds, infrastructure, medicines and equipment and human resources in terms of doctors, nurses, support staff, and administrative staff. For compliance audit, these necessary elements of the system assume the status of criteria. For example availability of funds may be related as a percentage of the GDP, budgetary allocation or expenditure and benchmarked to best-in-class figures at a national or international level. Availability of hospital beds for a given population in an area becomes one of the criteria to benchmark infrastructural adequacy against available standards. Similar is the case with medicines, equipment and human resources.

It is to be understood that the ultimate test of strength of the public health management system is its ability to deal with unprecedented crisis. Hence the focus of compliance audit should also be to report to the administration about the important lessons learned. This will assist the governments in their efforts to enhance preparedness.

### *Challenges to compliance audit*

For the successful adoption of compliance audit, it is necessary that the underlying policy, legal and regulatory framework should be clearly spelt out at a reasonably

granular level. Further, since during health emergencies of a large scale, the resources are stretched to their very limits, audit has to balance considerations of adherence to standards on the one hand, and consideration of the challenging situations within which emergency response is carried out on the other. Where the sector is substantially privately funded, the question of the extent of audit mandate also assumes importance. For example where the health insurance providers are predominantly in the private sector, it becomes significant as to whether the mandate for audit of the insurance sector is adequately established. Government regulation of private sector, like enforcing caps on the charges that may be levied for health services and imposing requirements for earmarking of hospital infrastructure for treatment of pandemic affected patients, are recent examples of operation of government control.

Changes required in the audit methodology is another challenge. More reliance may need to be placed on remote audits. This depends largely on the availability and quality of data and documents and the ability of audit to access and process these. Entry and exit conferences as well as routine interactions between the auditor and the audited entity will have to happen virtually and exchange of documents need to be online. These changes in methodology provide opportunities to both the parties to improve efficiencies but at the same time pose challenges to the smooth conduct of the process.

### *Horizontal Audit of Public Health Infrastructure and Management Services*

Against this backdrop SAI India has undertaken a horizontal audit of public health infrastructure and management services in 2021. The process is currently underway and the report is expected to be finalized during this year. The audit is conducted across all 28 states and 9 Union Territories of the country and, at a macro level, is expected to evaluate the resource availability statistics on the basis of established benchmarks. It also contemplates an in-depth analysis of the management and delivery mechanisms to bring out any gaps or problems in the same

#### *Scope*

In the Indian federal system public health is a State subject, which implies that the primary responsibility for the management and service delivery of the hospitals and dispensaries lies with the States. However, the federal government, through its several sponsored programs and projects, also plays an important role in this sector, particularly in areas like vital statistics, medical education and drug administration and also in planning, policy making and funding for public health at State and National levels. The audit is designed to cover the healthcare administrative departments related to health and family welfare, medical education etc. It would also cover a sample of healthcare facilities at the primary, secondary and tertiary levels. The primary healthcare centres are the first level of contact for the public and provide basic healthcare. Secondary facilities involve hospitals where specialized healthcare is



available. The tertiary level caters to patients referred from the former levels for more specialized consultative services. Regulation of private healthcare by the government will also be examined as part of the audit.

### **Objectives**

The audit is proposed to assess compliance to the rules and regulations and applicable authorities within which the public health management system in India operates with particular reference to the following areas:

1. **Health financing:** Audit shall examine the adequacy and availability for funding to the States as also its distribution among the primary, secondary and tertiary sectors. Established policies for percentage allocation in terms of GDP, budgets etc., to healthcare will be adopted as the standard to benchmark this assessment. The utilization, in terms of percentage of the allocation, shall also be considered in audit. A particular area for enquiry will be the adequacy and availability for funding during emergency situations.
2. **Health Infrastructure:** The adequacy of oversight mechanisms available with the public sector to ensure the sufficiency of infrastructure in the private sector will be examined. Infrastructure adequacy will be considered at the physical level involving hospitals, equipment and capacity and at the human resource level involving number of doctors, nurses, paramedics and community healthcare volunteers.
3. **Management of Health Services:** All services directly and indirectly related to provision of healthcare, which also include auxiliary services like diagnostics, super speciality, oxygen services, ambulance, immunization, maternity care and ante-natal services. Oxygen and ambulance services assumed great significance during the recent pandemic period.
4. **Procurement of medical devices:** Procurement is always risky and particularly during emergency situations there is the possibility that norms for procurement might have been violated on the plea of immediate necessity. In addition to procurement, effective utilization and management of equipment, consumables, vaccines and drugs in terms of storage and disposal will be examined. One particular area will be to examine whether there are standard operating procedures for procurement during emergency situations and whether these have been adhered to.
5. **Human Resource Development and Capacity Building** is a crucial aspect of any healthcare management system. In addition to examining the adequacy of human resources it is also important to examine the adequacy of policy structure to enable recruitment of skilled staff, their working conditions, continued professional development, retention and incentivisation.
6. **Adequacy of regulatory mechanisms:** The regulatory framework covering healthcare needs to encompass a wide spectrum of activities like regulation of the working of clinics, hospitals, testing laboratories, drug manufacture and

control, quality control for medical equipment and supplies to name a few. Availability of established standards, performance indicators and oversight mechanisms to ensure adherence to these will be the examined in audit.

7. **Health Insurance:** The purpose of health insurance schemes are primarily to ensure that people from low income groups have free and easy access to healthcare. Availability of such schemes, how inclusive are their terms and conditions as also the level of awareness about such schemes among the general public need to be examined.

### *Criteria*

The criteria will cover the policy framework involving national health policy, national health plans, the indicators established to examine related sustainable development goals as per the 2030 agenda of the United Nations etc. In India, parallel and traditional systems of medicine also play a major role in healthcare. Policies for regulation of such systems shall also be examined. In addition, standards in the area of education and training of healthcare professionals, standards of their conduct, standards for management and disposal of biomedical waste etc., will also be adopted as criteria for the audit.

### *Audit methodology*

The experience of the past year shows that conduct of audit observing norms of social distancing and remote working has not resulted in a reduction in audit quality. Hybrid workplaces and remote working have become the new norm for the audit profession as well. National and state level policies and regulations are easily available on the official websites of various ministries. But the effective conduct of audit will also depend on availability of statistical information on national and state data portals. Transaction level information from audited entities need to be sourced through engagement with the management. Many States in India have established integrated financial management systems which provide very granular information related to expenditures.

Availability of tools for stakeholder engagement like video conferencing, and tools for analysis of data along with staff skilled in such analytical procedures will be crucial to the conduct of audit. We should also place greater reliance on evidence gathered through surveys, and interviews and on modes of validation like affidavits.

## Auditing with Big Data Analytics

*Centre for Data Management & Analytics, SAI India*

### *Introduction*

Data analytics is the application of data science approaches to gain insights from data. It involves a sequence of steps starting from collection of data, preparing the data and then applying various data analytic techniques to obtain relevant insights. The insights include, but are not limited to, trends, patterns, deviations, inconsistencies, and relationships among data elements identified through analysis, modelling or visualization, which can be used while planning and conducting audits. Data analytics adds a competitive advantage to enable information based decision making. As it is an evolving discipline, the possible utilities of data analytics are still under experimentation and exploration in both public and private sectors.

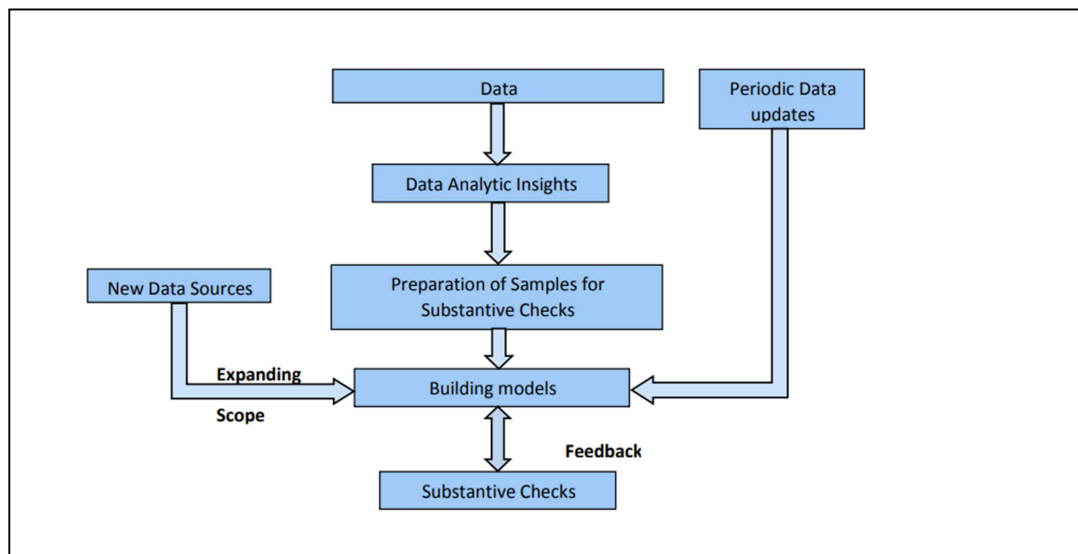
### *Use of Data in Audit*

Data is available to audit today in different forms and from different sources. Data analytics provides the potential to analyse these data sets and obtain insights to assist in the audit processes by identifying patterns, trends, descriptions, exceptions, inconsistencies and relationships in data sets and their variables. The insights so drawn would assist in setting the direction of the audits, by primarily identifying areas of interest or risk and in identifying exceptions.

Data analytics begins with identification and collection of various data sources for a particular audit. The analysis of data through various data analytic techniques will yield insights on the working of the audited entity. The risk areas or areas of interest identified through such an exercise will assist in identifying audit objectives and developing an Audit Design Matrix. Data Analytics will also assist in identifying the sample of audit units where substantive checks will be conducted.

### *Data Analytics Process flow in Audit*

The schematic diagram of the process is shown below:



**Figure 4: Data Analytics Process Flow in A**

### *Data Analytics Architecture for Audit organisation*

Analytics architecture refers to the systems, protocols, methods and technology adopted to collect, store, and analyze data. It contains multiple technical layers that allow to effectively collect, organize, and parse the multiple data streams.

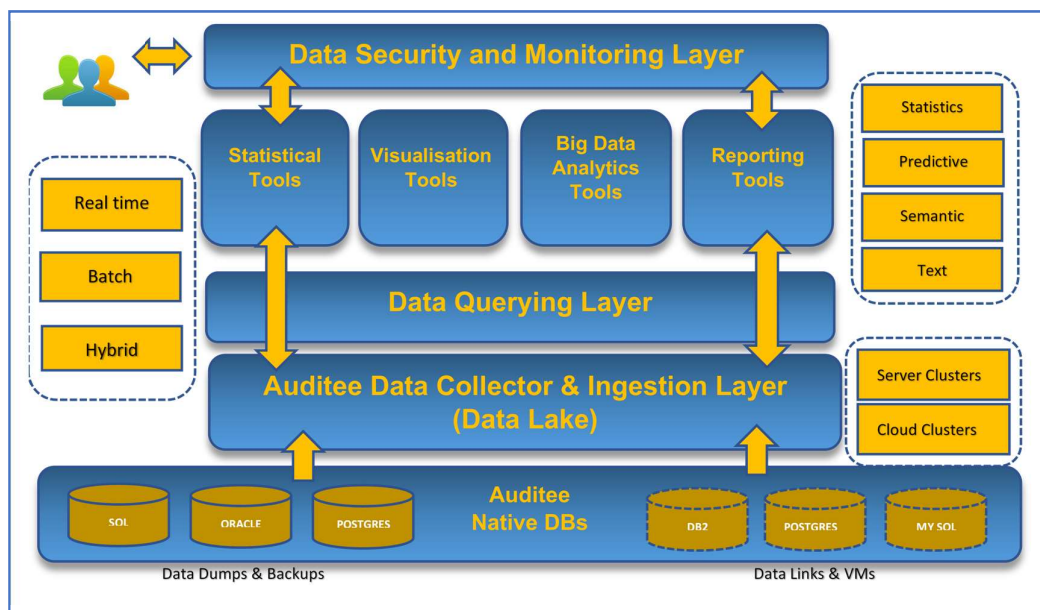
Analytics architecture also focuses on multiple layers, starting with data warehouse architecture, which defines how users in an organization can access and interact with data. Storage is a key aspect of creating a reliable analytics process, as it will establish both how your data is organized, who can access it, and how quickly it can be referenced.

When building analytics architecture for Audit organizations, both the hardware—how data will be physically stored—as well as the software that will be used to manage and process it needs to be considered. Since audit has been largely and increasingly dealing with data, it is becoming the central part of audit operations. The fast-rising amount of data collected from multiple auditees, requires a proper and efficient data architecture to manage and utilise the auditee data in an efficient manner.

It should not only help in just store the data but plan the optimal flow for data from capture to analysis. Understanding these steps can give a better idea in selecting hardware and logistics needs as well as best Data Analytics tools to use in Audit.

Since audit organisation mostly deals with various types/kinds of data and no specific data stream is defined, the analytics architecture should be scalable as well as flexible to construed to dynamic requirement of the Audit Organisation.

A typical Data Analytics Architecture for Audit Organisation can be as shown below:



**Figure 5: Data Analytics architecture for an Audit Organisation**

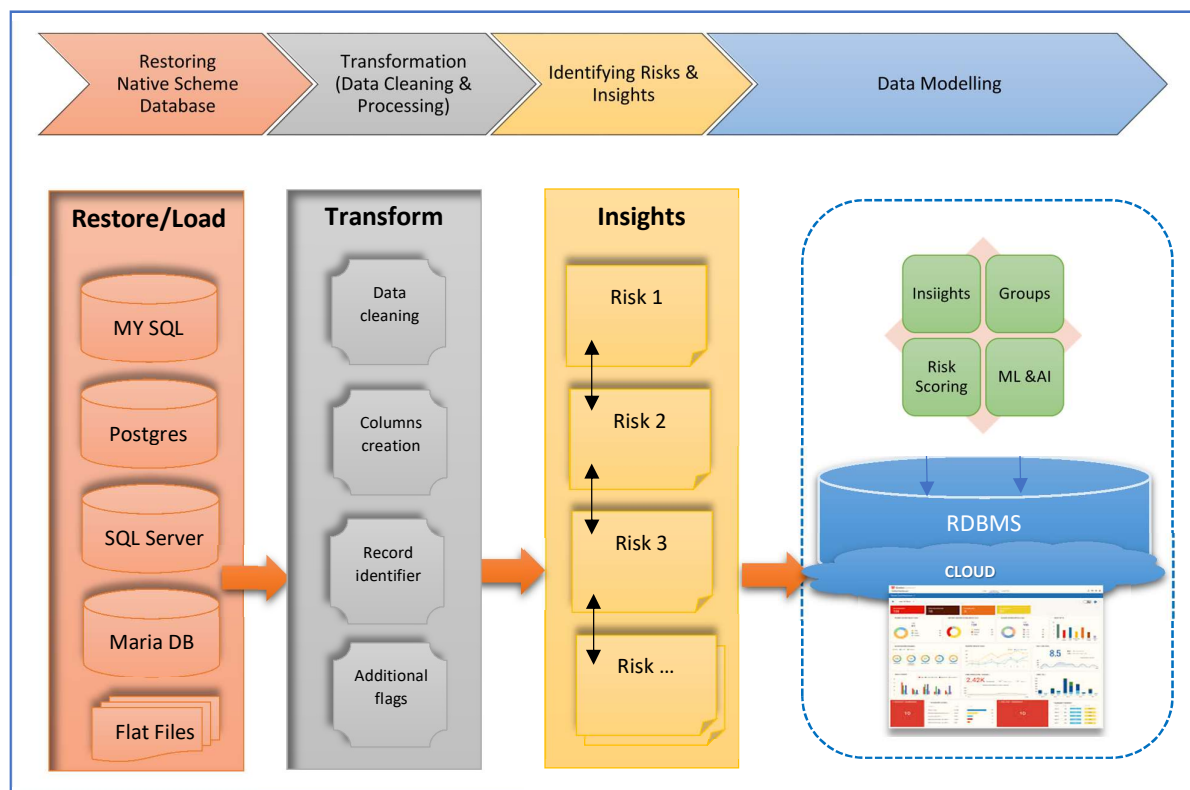
### *Data Analytics Model in Audit*

The various analyses can then be built into a re-executable Data Analytic Model. This will ensure that results of data analysis can be used repetitively with periodic updating of data. Establishing a mechanism for receiving data periodically will be crucial for such an approach. The scope of the model once built can be expanded by incorporating the feedback from substantive checks and bringing in additional data sources. Thus, data analytics in audit is not envisaged to be a one-off process for a specific audit, but is expected to evolve over time.

From the point of view of the scope and purpose of the audit, the Data Analytics Model can be classified in to two major groups (a) Episodic Data Analytics Model and (b) Data As Service Model.

### (a) Episodic Data Analytics (EDA) Model

Episodic Data Analytics Model is normally deployed during the Performance Audit approach to various social sector schemes or public benefit schemes. The main focus being one time, covering a 4-5 years period of the scheme in the audit, EDA model can be implemented to bring out various lapses and building insights on various risk parameters. The Data being considered as a whole for a specific scheme and for a longer period, the risks and insights are developed for proper audit planning and larger coverage of the Scheme. A typical EDA model is depicted in the diagram below:

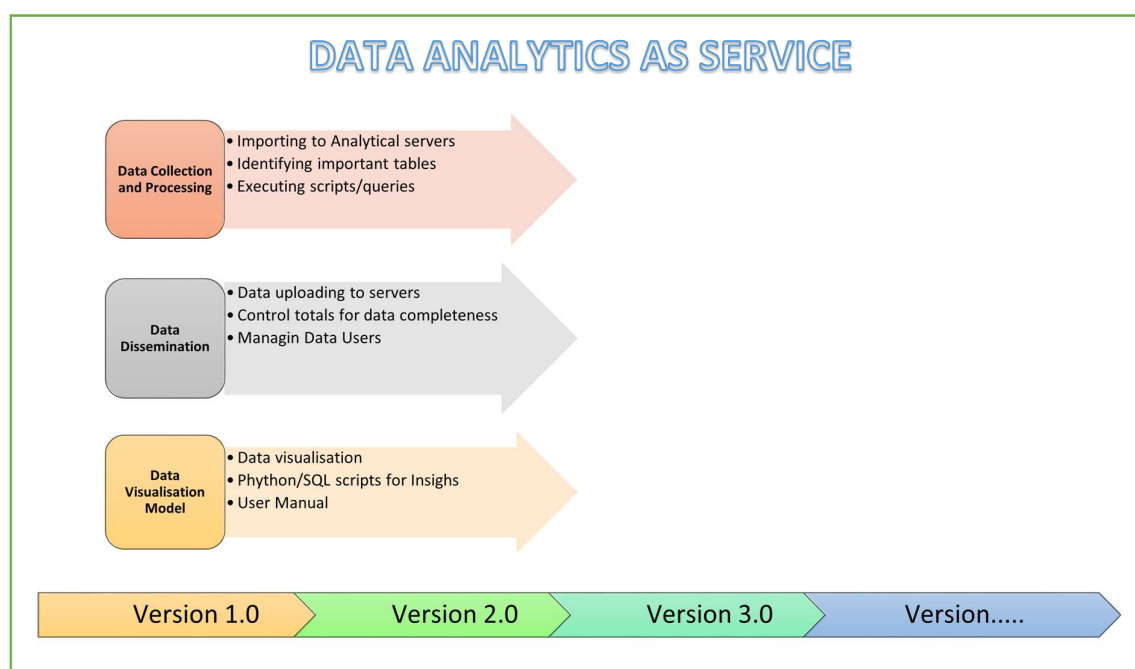


**Figure 6: Episodic Data Analytics Model**

Data Analytics as Service model is applicable when the transaction based approach to audit is adopted for a selected short period. The main focus being compliance audit, where the audit is done continuously. The data is obtained from the auditee on a periodic basis, which is utilised for the various types of compliance and performance audits. The DAS model helps in evaluation of the auditee data on the predefined set of rules and the insights are derived instantaneously allowing the audit team in identifying the risks and observations for reporting. The DA model should be able to adapt to the changes in the structure of the data. The time series comparative analysis of the data sets received can also bring new insights to the audit.



A typical DAS model is depicted in the diagram below:



**Figure 7: Data Analytics as a Service Model**

### *Data Analytical Tools in Auditing*

Data analytical tools help auditors to do analysis in a more professional and systematic way. The selection of the tools can be based on the functionalities available to the auditors under various tools. Some tools are specially designed for auditors whereas some are general purpose analytical tools. Hence auditors can always have a variety of tools to do better data analytics. Comparative chart showing the few functions versus various analytical tools is shown below:

**Table 2: Comparative Chart of Data Analytic Tools**

Functionalities	Tableau	Knime	IDEA	SQL	R	Python	Power BI
Handling of Big Data	Y	Y	Y	Y	Y	Y	Y
Data Cleaning		Y			Y	Y	Y
Handling Missing Values		Y	Y		Y	Y	Y
Graphs & Charts	Y		Y		Y		Y
Sampling		Y	Y				
Statistical Methods		Y	Y	Y	Y	Y	
Machine Learning and AI						Y	

Table Joins/Relations	Y	Y	Y	Y			
Data Modelling	Y						Y
Geo Data	Y						Y
Audit Trail and Work flow		Y	Y				

### *Cluster/Risk based Model for Sampling*

The results of the data analysis needs to be verified through sample test to ensure its effectiveness in audit and to collect evidence of the insights. Hence, a risk based model would be required to cover all the risks/insights identified in during the data analysis. Necessary clustering can also be created. The first step towards the risk based model would be to create a risk matrix based on all insights. Necessary weightage can be allotted for each risks/insights by allotting risk score. Further, additional normalization on the selected parameters can be done on the cases falling under specific risks/insights. A typical Risk based weightage model would be as shown below:

*Table 3: Risk Based Weightage Model*

Risks/Insights identified during Data Analysis	Risk Score	Normalisation parameter	Weighted score
Insights 1	XX	Parameter X	1+ (Score X Normalised value in 0.1)
Insights 2	XX	Parameter X	
Insights 3	XX	Parameter X	
Insights 4	XX	Parameter X	
Insights 5	XX	Parameter X	
Insights ...	XX	Parameter X	
General	XX	Parameter X	

General scoring is given to all records to ensure all cases are allotted a score in addition to insight scores.

A Risk based sampling approach is recommended so that more risky cases can be selected on priority based on weighted score calculated for each record.