

ENHANCING APPLICATION OF INFORMATION TECHNOLOGY IN OPERATION OF THE STATE AUDIT OFFICE OF VIET NAM

Information Technology (IT) is nowadays being applied in a wide and deep manner in all fields of science, economics, politics and society all over the world. IT enables the countries to operate e-Government and improve the efficiency and quality of the activities of State agencies, organizations and units.

For the operation of a Supreme Audit Office (SAI), IT not only helps to improve the quality, efficiency and effectiveness of audit by speeding up the implementation of the audit but also promotes the transparency and disclosure of audit results.

Besides, the increasing computerized data processing has made contributions to expand the audit scope and created new methodologies of audit, analysis and evaluation. This requires auditors to be knowledgeable of the IT environment of the auditees, capable of evaluating information systems to determine whether the information system, control system with IT applications of the audited units timely provide accurate and complete information as well as ensure the confidentiality, integrity, efficiency and reliability of electronic data or not. Therefore, it is an essential requirement for the auditors to capture and evaluate these IT applied systems of the audited units.

1. Overview of e-Government in Vietnam

Electronic Government (e-Government) refers to a government of which all activities are "electronic", "digital". However, e-Government is not merely a computer and/or the Internet; rather, it is a comprehensive renewal of relations (especially the relation between the government and citizens), resources, processes, operation methods, and the content of activities performed by central and local governments.

The purpose of e-Government is to create a better business environment; to have online customers; to promote efficient operation of the government and wider participation of the citizen; to improve productivity and efficiency of governmental agencies; to improve the quality of life for communities in remote areas.

After over 10 years since the start of construction and development, Vietnam's e-Government has made remarkable progress in association with specific periods:

* *Period 2003 - 2005*: This is an early stage of applying Information Technology (IT) in management of the government as well as gradually developing e-Government in Vietnam. After the year 2003, the government and

most of the ministries have had their own electronic portal offering wide range of legal documents, as well as updated information in the areas of their direct management.

* *Period 2006 - 2009*: In 2006, the National Assembly officially enacted Information Technology Law that specifies the principles, conditions, content of IT application in the operation of state agencies. In 2007, the Government implemented the Project “Program of IT applications in the activities of state agencies for the period 2007-2010” (Program 64), which confirmed the determination of the government to promote IT applications in the works of government agencies and was seen an important initial legal basis for the construction of e-Government in the future. In 2009, the application of IT in government sector made major changes, basing on the initiative of the ministries and localities instead of on a unified plan from the Central as before.

* *Period 2010 - 2013*: The year 2010 is considered an important milestone in the implementation of e-Government in Vietnam. The Government developed a national plan of "ICT applications in state agencies for the period 2011-2015" with a total investment of more than \$40 million for 20 national projects. In 2010, the ratio of Ministries having their website reached 100%; for provinces and cities, it also reached 98.4%. Besides, the average rate of public online services at the ministerial level accounted for 76.6%, dramatically increased from 46.9% of 2009; at the local level, it was lower but still encouraging rate of 55.6%. The year 2012 continues to mark the development of IT applications in administrative activities as well as the construction of e-Government in Vietnam. The year 2013 is considered as a pivotal year in implementing the National Programme for IT applications in the activities of state agencies (2011-2015). The objective of this stage is to continuously strengthen the application of modern technology to improve the quality of the operation of government agencies; to establish a comprehensive and transparent national information system; to improve public services and the relationship with the citizen, businesses for a more efficient e-Government.

It can be seen that the Government of Vietnam has identified the important role of ICT in the national economy and considered it as one of the driving force for socio-economic development of the country for more than 10 years. Vietnam ranks 4th in Southeast Asia, and 12th among 27 countries in Asia-Pacific. The enhancement of ICT infrastructure has contributed to promote the development of e-Government in Vietnam.

2. Application of Information Technology in operation of the State Audit Office of Vietnam

For more than 20 years of operation, as the agency auditing public finance and assets, established by the National Assembly, operating independently and abiding only by the laws, the State Audit Office of Vietnam has played an increasingly important role in the process of development and integration of the country. The SAV's audit results have been used more and more in management, administration, supervision, approval and decisions on the finance - budget issues and completion of legal policies.

IT application and infrastructure of the SAV: Recognizing the role of e-Government and IT applications in the management and operation as an inevitable trend in the current context, the SAV has focused on investment and development of IT infrastructure and software application in management and operation. In 2002, SAV established Center for Information technology which functions IT applications in the activities of the SAV. Since 2004, the SAV's Head office and regional offices have had local area network (LAN) that allows the exchange and sharing of information within and out of the units. The SAV has developed a website to introduce, disclosure its operation and results for enhancement of transparency and internal communication through the Internet.

During its development, the SAV has developed and applied several software in audit activities such as audit result consolidation software, audit log and monitoring the implementation of audit recommendations software; a number of software in internal management, direction (such as tracking leadership direction software; work plan development software; human resource management software; training management software; financial management software; software for foreign affairs and international cooperation; administration software, etc.) Some software has been implemented throughout the SAV and has gained some achievements in supporting the internal management and administration of the SAV; shortening the time of consolidating audit reports, contributing to improvement of audit efficiency. However, there are no software supporting the management of other activities such as audit quality management, audit planning which results in limited utilization efficiency. In the field of enterprise auditing, the SAV has applied some software that support the auditors in audit sampling.

In parallel with improving and upgrading IT infrastructure for the SAV's operation in general and auditing activities in particular, the SAV has strengthened development of audit regulations, guidelines for auditors' knowledge of auditing in IT environment. Only five years after its establishment, the SAV developed and issued 14 auditing standards (AS) including one on auditing in IT environment, i.e. AS 13 - Computerized data processing and audit practice in 1999.

The SAV is currently developing SAV Auditing Standard system in line with the ISSAIs of INTOSAI (SAS). In particular, prior to composing some standards of highly technical nature and IT- support necessity such as the standards on audit risk, audit materiality, audit sampling and so on, the SAV had investigated the auditing practice in some international private auditing firms (Big 4). The investigation results showed that the application of highly technical standards such as audit risk identification and assessment, audit materiality, audit sampling, analytical procedures ... requires the audit team's qualified profession as well as capacity of IT application at a certain level.

In order to develop and apply the SAS into practice in line with the actual situation of the State Audit Office of Vietnam and international practices, the SAV has intensified cooperation with international donors. In particular, Project "Modernization of audit methodologies and practices" sponsored by the World Bank (WB) was carried out from November 2011 till November 2014. The project has assisted the SAV to complete guidelines on auditing standards, the audit methods, techniques and records, templates which gradually approach the level of developed countries and meet the requirements of effectively implementing all types of audit as well as deep integration in the state audit in particular and the inspection and control of the public sector in general.

In addition to signing cooperation agreements to strengthen professional exchanges with international private auditing firms (Big 4), the SAV has also received support from international donors such as the EU, GIZ for improvement of audit documentations, software, quality control, programs, etc.

IT workforce development: The SAV has much focused on training and retraining. In addition to organizing internal training courses, the SAV has annually sent many IT engineers from Center for Information technology to participate in IT training courses and appointed auditors to take part in training courses and workshops on auditing in IT environment held by INTOSAI and ASOSAI to further enhance IT competence of the IT staff and the auditors.

To improve and enhance the quality, efficiency and effectiveness of the SAV's activities in general and IT application in particular, the SAV has developed **The SAV Development Strategy by 2020** in which "*IT applications in the operation of the SAV*" is one of the main activities.

In order to select and implement a number of important and highly prioritized activities in the SAV's Development strategy by 2020, the SAV issued the Strategic plan for the period 2013-2017 with 08 strategic goals in 2013. In particular, the "*Strengthening IT applications in the operation of the SAV*" is one of the strategic goals with special emphasis areas including: (i) To build and develop IT infrastructure; (ii) To accelerate the development and

application of management software, especially software supporting audit activities; (iii) To develop IT staff, to supplement qualified IT staff for audit activities and improve IT competence and skills for the auditors.

In implementation of the SAV's Strategic Plan for the period 2013-2017, the SAV has collaborated with FPT Joint stock company to develop a **Master plan for IT development of the SAV for period 2015-2020** that was issued by the Auditor General in December 2014. The objective of the Plan is "Strengthening IT applications in the operation of the SAV to improve the effectiveness and efficiency of the SAV and gradual modernization of the SAV; meet the requirements of international economic integration in accordance with the international principles and practices and actual conditions of Vietnam". The overall objective is specific on the following targets:

- Applications: Promoting the IT application in audit activities, enhancing the application of modern methods and IT in auditing in order to gradually increase the number of audits at the Head office and decrease the time of field audit for cost reduction. Promoting IT application in the direction and management of the operation of the SAV. By 2020, 100% of internal documents will be achieved, over 90% of official documents will be exchanged electronically.

- Infrastructure: Construction and improvement of technical infrastructure for the IT applications throughout the SAV, mass and communication media for audit activities, ensuring the direction and internal management in a stable, safe, secure and efficient network. An advanced and high-tech centralized data center will be built to meet the requirements of IT applications by the year 2020. Wide area network (WAN) will be built to connect local area network (LANs) together. Constructing security system at a high level. 100% of the employees are fully equipped with IT equipment for their job.

- IT Human resource: Developing adequate and high quality IT human resource to meet the requirements of management and use of IT system and IT audit. Improving the skills of IT applications in the work of civil servants and gradually improving the ability of auditors to conduct an audit in IT environment. Promoting online training courses for civil servants.

To accomplish these objectives, in the Master plan for IT development of the SAV for period 2015-2020, the SAV has proposed four groups of solution for IT applications by 2020. The solutions include:

Group 1 – Solutions on IT overall model of the SAV. This model is divided into five layers: Layer of users; SAV Web portal; Layer of application software; Layer of database; Layer of infrastructure.

Group 2 – Solutions on IT applications include construction and application of software group for internal direction and management; for auditing activities; for analysis, synthesis and exchange of information.

Group 3 - Solutions on IT infrastructure include comprehensive solution on IT infrastructure; building a data center; building LAN and WAN connections at regional audit offices; building secure systems and information security; synchronous equipped workstations and peripherals; equipping with proprietary software.

Group 4 – Solutions on IT workforce include development of specialized IT team; training and technology transfer.

3. Lessons learned of the State Audit Office of Vietnam

On the basis of empirical research in the application of IT in the SAV and studying the experience of a number of regional SAIs, we can draw some lessons about effective application of IT in audit activities of the SAV as follows:

Firstly, the enhancement of IT applications in audit activities of the SAV requires the determination of leaders at all levels; raising awareness of all leaders, officials, servants, employees and workers throughout the sector about the importance of IT application for quality, efficient and effective audit; the whole sector's commitment and successful implementation of the SAV Strategic plan for the period 2013-2017 and Master plan for IT development of the SAV for period 2015-2020.

Secondly, the enhancement of IT applications should be carried out in a comprehensive way in terms of applications, infrastructure and human resources including IT staff from IT Center and the auditors for gradually modernized audit methods and profession in order to implement IT in the future.

Thirdly, the SAV has strengthened the exchange and sharing of knowledge and experience in applying IT in audit activities with regional and international agencies through workshops, conferences, training and retraining , technical assistance organized by the INTOSAI and ASOSAI. The participants then continue to share the acquired knowledge and experience within the sector.

Fourthly, the SAV's IT application requires the positive coordination and support from the ministries and agencies in the country, especially FPT JSC in terms of both technical equipment and IT application software.

Fifthly, the SAV continues the cooperation with international donors such as the World Bank, EU, GIZ ... to strengthen the capacity of the SAV of IT applications in auditing activities.

4. Recommendations

In recent years, as the professional organization of Supreme Audit Institutions (SAIs) in Asian countries that provides technical guidance in the field of state audit, the ASOSAI has constantly promoted the development and sharing of knowledge; improved the quality of state audit in the region; and enhanced professional competence and role of the SAIs in each country. Regarding the application of IT in audit activities, the ASOSAI has helped to strengthen IT capacity through various forms such as workshops, training courses, technical assistance, as well as become a meaningful bridge between the member SAIs and the international donors.

In the future, the State Audit Office of Vietnam would like to receive more support of the ASOSAI in all areas for enhancement of the overall capacity of the SAV in general and successful implementation of the Strategic plan period 2013-2017 in particular including the strategic goal *"Enhancing IT applications in the operation of the SAV"*, especially in the period 2015-2017 when the SAV focuses on completing the development and application of the SAS into practice. Moreover, the SAV also needs support of international experts with experience in building standards and applying them in practice with the focus on successful application of highly technical standards such as audit risk identification and assessment, audit materiality, audit sampling, etc.