Country Paper Cyprus

Leveraging Technology to Enhance Audit Quality and Effectiveness

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Section 2.1 Questions

1.   Discuss the status of e-Government/ICT carried out in your country.

Despite the fact that many processes are being performed manually, an increasing number of services to the citizens are being conducted in an electronic way and form. Practically, departments from all ministries have at least one such service, for example, renewal of road tax license, payments of contributions to the Social Insurance System, utility bills payments, submission of income tax returns, etc.

Some of the projects currently underway, are the Information System for the Stenotyping of the Court Minutes, the Geographical Information System (GIS) of the Ministry of Agriculture, Natural Resources and Environment, the IT System for the National Health Insurance System of the Ministry of Health, etc.

http://www.mof.gov.cy/mof/DITS/dits.nsf/page7_en/page7_en?OpenDocument

http://www.mof.gov.cy/mof/DITS/dits.nsf/page06_en/page06_en?OpenDocument

2.   Explain on the governance, risk and control framework/structure which govern and regulate the e-Government/ICT implementation.

The Department of Information Technology Services (DITS) (organically under the Ministry of Finance) is the Government body responsible for matters concerning the promotion and application of Information Technology and e-Government in the Public Sector. The mission of the department is to plan, develop, implement, manage and maintain the Information and Communication Technology (ICT) systems which modernize the functioning of the Public Sector with a goal to:
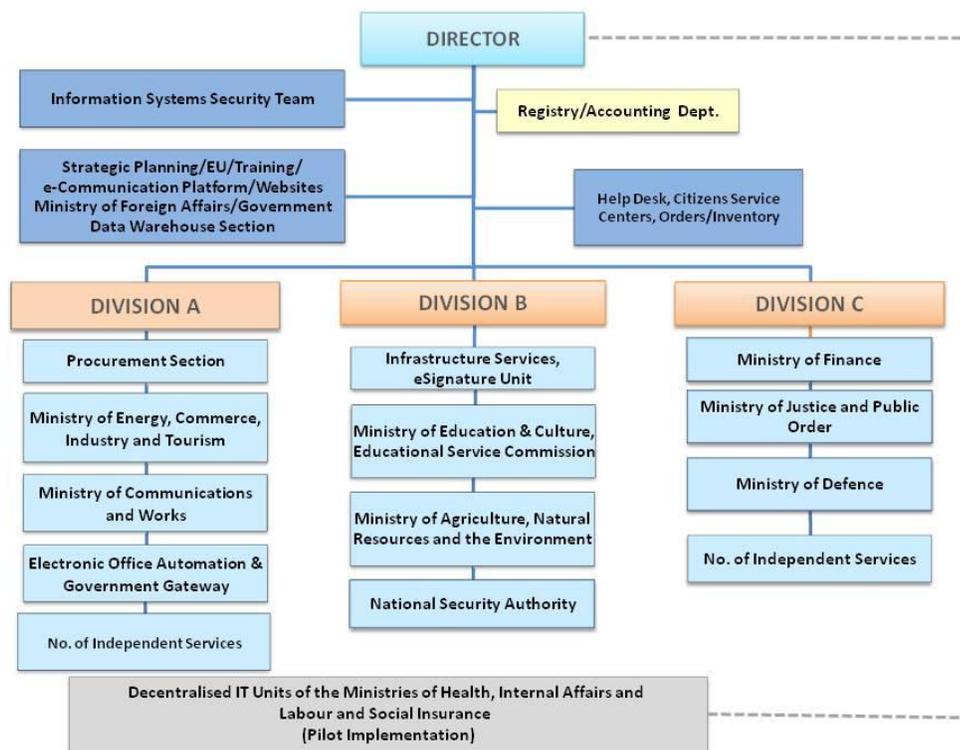
- Improve the services offered to the public

- Increase the productivity and efficiency

- Decrease the functioning costs

- Save time and resources

IT officers are also placed organically in almost all government departments for immediate support of various IT issues, including the development of new software for the department.

However large projects (such as the Social Insurance System, of the Ministry of Labour, Welfare and Social Insurance) have been outsourced to the private sector.

http://www.mof.gov.cy/mof/dits/dits.nsf/page02_en/page02_en?OpenDocument

Organisational Structure of the Department of Information Technology Services

DIRECTOR

Information Systems Security Team

Registry/Accounting Dept.

Strategic Planning/EU/Training/ e-Communication Platform/Websites Ministry of Foreign Affairs/Government Data Warehouse Section

Help Desk, Citizens Service Centers, Orders/Inventory

DIVISION A

- Procurement Section
- Ministry of Energy, Commerce, Industry and Tourism
- Ministry of Communications and Works
- Electronic Office Automation & Government Gateway
- No. of Independent Services

DIVISION B

- Infrastructure Services, eSignature Unit
- Ministry of Education & Culture, Educational Service Commission
- Ministry of Agriculture, Natural Resources and the Environment
- National Security Authority

DIVISION C

- Ministry of Finance
- Ministry of Justice and Public Order
- Ministry of Defence
- No. of Independent Services

Decentralised IT Units of the Ministries of Health, Internal Affairs and Labour and Social Insurance (Pilot Implementation)

3. Do you have a Strategic Plan elaborating on the strategic thrust areas for ICT development?

The main strategic plans are a combination of EU and National strategies, mentioned below.

European Union Strategies:

- e-EuropePlus – e-Europe 2005 – i2010 Strategy
- e-Government 2011-2015 action plan
- Digital Europe 2020

National Strategies:

- Cyprus Digital Strategy
- e-Inclusion (to end the digital divide, i.e. people who do and do not have access to modern IT)
- Government Computerization Plan
- e-Government Strategy

http://www.mcw.gov.cy/mcw/DEC/Digital_Cyprus/ict.nsf/All/D8236D4EB0AD5F76C2257C93002DC3FD/$file/%CE%A0%CE%B1%CF%81%CE%BF%CF%85%CF%83%CE%AF%CE%B1%CF%83%CE%B7_%CE%A4%CE%A5%CE%A0.pdf

4. Based on your SAI's experience in the e-Government/IT projects implementation, what is/are your SAI's opinions on the effectiveness of the ICT framework structure which governs and regulates the projects implementation in meeting your government's e-Government/ICT overall goals.

Law N. 12(I)/2006 on public tenders regulates the whole process from the public announcement to the assignment of the tender.

The Department of Information Technology Services uses PRINCE (Projects in Controlled Environments, a project management methodology) and SSADM (Structured Systems Analysis & Design Method, a widely-used computer application development method).

The effectiveness of the ICT framework structure varies and depends primarily on the prompt identification and completeness of the user requirements for each project undertaken by DITS.

5.   What are the challenges and areas for improvement on the e-Government/ICT framework?

- Availability of resources (HR, budget restraints)
- Systems interoperability/integration and interfaces with other systems and cooperation between departments
- Priority setting
- Culture and mentality
- User requirements setting

Section 2.4 Questions

1. With the implementation of e-Government or ICT development in your country, discuss on legislations being amended or new legislations being introduced to address the issues of governance security, risks management, legal mandate, internal controls. Any specific amendment/s with regard to your SAI's' mandate with the implementation of e-Government/ICT?

All EU legislations are enforceable in the Republic of Cyprus.

Also, the Ministry of Defence is acting as the National Security Committee, with regards to information security, and the Office of the Commissioner for Personal Data Protection, according to Law 138(I)/2001, deals with the protection of personal information relating to an individual.

The e-Government framework, that is DITS, is also governed by ISO/IEC 27002, which is an information security standard published by the International Organization for Standardization (ISO) and by the International Electrotechnical Commission (IEC), under the title "*Information technology – Security techniques – Code of practice for information security management*".

Lastly, no specific amendments with regards to our SAI's mandate, other than in Law No. 113(I)/2002, "…the Auditor General has the authority to request any evidence of information in any form, including the electronic form, and any explanations either written, or oral…"

2. How are risks evaluation and management at the pre-implementation, implementation and post implementation coordinated and implemented according to the framework adopted?

For every new project, a project board assigns to a team, the responsibility for the preparation of the tender documents, and also to identify potential risks concerning the implementation process. These risks are documented and communicated to the project owner.

A different team, also assigned by the project board, is responsible for the tender evaluation.

A project team is responsible for the monitoring of the actual execution of the project, managing risks during the implementation phase.

Extensive test scenarios are carried out during the post implementation phase in order to assess the quality of the implementation.

3. What is your SAI's role in this area? Elaborate on the SAI's findings so far.

Certain projects are being selected for audit. Our Office assesses the document preparation phase, the project management process through reports communicated from the project manager to the project board, deviations from the project requirements, and final testing/reviewing.

Some findings include the following:

- Poor project management
- Deviation of development according to user requirements
- Project owner (management and staff) does not fully participate in the process and/or is not fully committed to the overall project.

Section 2.5 Questions

1. How has your SAI approached the capacity development of specialist ICT auditors? Has your SAI engaged external experts in specialized ICT areas?

Our SAI currently employs 3 specialized ICT auditors, and their supervisor. IT educated auditors are also employed, conducting financial audits across all our Office's auditees.

They participate in training seminars, both in Cyprus and abroad, organized by the EUROSAI IT Working Group, of which we are a full member, and also any other training seminars organized by third party specialists. They can also be trained 'in-house' by other senior staff.

In our SAI's budget for 2014 there are 2 articles for training purposes:

Local Training	€4.250
Scholarships and Training Abroad	€8.500

In addition to the above, there is also one article for purchase of services, for a total of €89.000, which is to be used mainly for outsourcing the audit of local authorities for previous years, but, this can also be used for the engagement of other experts as well.

2. Is your SAI involved at the pre-implementation of e-Government/ICT projects as advisors? What measures or mechanisms are in place to ensure that that there is no conflict of interest?

Yes. Our SAI is involved at the pre-implementation of certain projects as advisors. This is done by our IT-section on selected projects.

The conflict of interest is avoided, because the financial and compliance audit is being conducted by another section, i.e. the section responsible for the audit of that specific government department.

3. How does your SAI's role fit into the overall ICT Framework?

As mentioned above (see question 2), our Office participates, as an advisory body, in the different stages of computerization projects, from the feasibility study and design of the system to the final implementation.

We are also assessing the overall "Government Computerisation Plan".

Section 3.3 Questions

1. Elaborate on the usage of IT tools by auditors in performing their financial and attestation audits.

Various tools, both generic and specific, are being used by our auditors:

- MS Excel, MS Access and IDEA (Interactive Data Extraction and Analysis), for sampling, data analysis, etc.

- TeamMate Audit Management Software, for the recording of actual audit field work, using primarily the "Electronic Working Papers" module.

- eOAS (Electronic Office Automation System), used to record, locate and retrieve all relevant mail/documents with respect to any of our auditees.

- MS Office, i.e. MS Word for text processing, and preparation of Audit Reports and findings, and MS Outlook for emails.

2. In respect of IT projects and system development, discuss how IT audit team perform their audit.

A universal audit program is being used for all our audits, containing audit steps regarding general controls to be audited. Additional audit steps are applied when needed, based on the nature of the project. Tender documents and interim reports are being taken into consideration.

3. Elaborate on the SAI's findings on IT project failures in your country, if any.

Main issues, as previously discussed, are:

- Failure to identify, properly analyze and document user requirements
- Failure to meet user requirements
- Not full commitment of staff participation during the various project phases
- Bad project management

- Deviations from project specifications and milestones
- Staff turnover of the contractor's project team (private sector), and the inability to replace them with other skilled staff

4. Discuss the effective monitoring control using technology to prevent the future project failure.

Use of MS Project, which is a project management software, used for time activities analysis, providing a useful insight on the project and any risks associated with it.

Section 4 Questions

1.   Discuss on audit tools used by your SAI in performing data analytics. What is your coverage in data analytics?

Although there are several licenses acquired by our SAI for IDEA, auditors prefer to gather and process data and information using MS Excel, because they feel more comfortable with it. Especially version 2010 has one million record tables available, which is more than sufficient for our needs.

2.   Have your SAI make used of analytics on unstructured data, performing data mining and collecting of audit evidence?

Yes. IDEA, MS Access and MS Excel are used to perform data mining and collect audit evidence.

3.   To what extend has your SAI make use of data analytics in your audit?

Depends on the audit, which is always decided during the planning phase.

For example, the Audit Section responsible for the audit of the Ministry of Labour, Welfare and Social Insurance, has conducted several audits using data analytics, such as professional driving licenses holders of which also receive disability pensions, or asylum seekers which have been rejected by the reviewing authority for refugees and continued to receive public assistance (in monetary form), have been collected and analyzed by our auditors.

These have been previously planned by our SAI's management team.

4.   What are the constraints faced in obtaining access to data for analytics. This can either be due to system complexities, data from different sources and platform, SAI's capacity and capabilities, liability and compatibility issues, etc.

The constraints lie predominantly by the inability of some of the current IT systems to extract reports in plain text or table format.

No major issues concerning capacity and capabilities, but the IT team could be further enhanced with extra staff.

5.   Has your SAI engage in the form of analytics technique to assist in fraud defection or investigations? Please elaborate.

Yes, in some cases, for example in the investigation of Municipalities Funds defalcation investigations, and investigations concerning the buy/sell orders in the Cyprus Stock Exchange.

Section 5 Questions

1. Discuss on development of staff skills in technologies. Explain your capacity building programme. If not, what is the available support?

As previously mentioned, there are funds available for the training of staff. Our capacity building programme comprises of in house training, and also outsourcing regarding certain training areas.

2. Discuss the techniques that could be employed to maximise the acceptance of technologies.

The Technology Acceptance Model can be used to maximize the acceptance of technologies. It is an information systems theory that models how users come to accept and use a technology. The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it, notably the Perceived usefulness (PU) and the Perceived ease-of-use (PEOU).

Another factor to be taken into account is the IT-literacy levels of staff. It is true, that some auditors are more IT-literate than others. As a result of that, our SAI can only invest in staff training, in order to ensure that the transition to the new (or the improvement of the current) technologies are accepted by our staff.

3. Are there any involvements from external parties in ICT capacity building?

Outsourcing of certain training lectures.

Section 6 Questions

1. Explain how the findings of analytic communicate to the SAI management.

Like all findings, analytic findings, are documented in the audit work report, and are thus communicated to the SAI management. All related work documentation is available for review.

2. Discuss the impact of audit recommendation to auditees resulted from analytics.

Recommendations resulted from analytics, are always supported by sufficient and appropriate findings and examples. Auditees hopefully follow our recommendations and apply appropriate solutions.

If the errors identified are non-systemic, then extra remedies could be recommended, but if they are of a systemic nature, then recommendations regarding amendments of the IT system and procedures, are suggested by our Office.