



INTOSAI
WGITA



EUROSAI
IT Working Group

Tutorial on Active IT Audit Manual

Active IT Audit Manual

(tutorial)



Tutorial on Active IT Audit Manual

1. Introduction

“IT Audit is an examination of implementation of IT systems to ensure that they meet the organization’s business needs without compromising security, privacy, cost, and other critical business elements.”

(WGITA – IDI HANDBOOK ON IT AUDIT FOR SUPREME AUDIT INSTITUTIONS)

“IT Audit is, thus, a broad term that pervades Financial Audits (to assess the correctness and compliance to other assertions of an organization’s financial statements), Compliance Audits (evaluation of internal controls), and Performance Audits (to assess whether the IT Systems meet the needs of the users and do not subject the entity to unnecessary risk)”

(ISSAI 5300 PARAGRAPH 3.2)

The “ActiveITAuditManual” tool have the essential objective of putting in practice the “WGITA – IDI Handbook on IT Audit for Supreme Audit Institutions”, thus helping the auditor with information essential to plan an IT Audit, findings collection and knowledge sharing.

It’s provided as a zip folder. It contains an Excel spreadsheet, this tutorial and several Word documents, as well html documents that act as data sources for the Excel spreadsheet. Once extracted, all files must be kept in the same folder and subfolders.

The internal behavior of the Excel spreadsheet, as well of some Word documents, was customized in VBA. To help the code inspection is full commented in English. It only references functions and objects (late binding) pre-installed in OS (no need to reference additional libraries). So, you only have to enable macros!

Some of the Word documents contain content controls that must be preserved and used to insert the requested data. The automations depend on them.

The html documents are containers for SVG (Scalable Vector Graphics) data, compliant with W3C standards and dialects to markup graphics. Nowadays SVG is implemented in Firefox, Opera, Safari, Chrome, Edge, Internet Explorer and other browsers. Please keep the browsers updated!

The documents were tested in the versions 2007/2010, 2013 and 2016 of Microsoft Office.

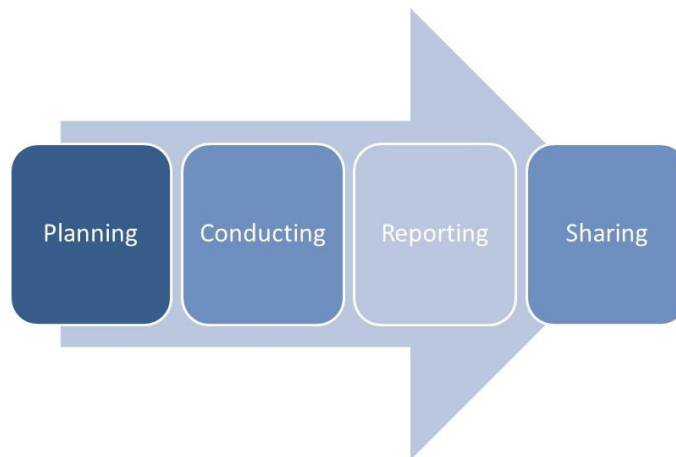
Consider this tool not as an ended product but as a prototype. It follows closely the approach defined in WGITA – IDI Handbook on IT Audit for Supreme Audit Institutions.



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The main objective is to provide the users with practical guidance, essential technical information and key audit questions needed for effective IT Audit planning and conducting.

The full process diagram can be see next:



It's important to ensure that the audit process is preserved to enable subsequent verification, monitoring and share of the audit analysis procedures (ISSAI 100 PARAGRAPH 42). This involves documenting:

- The plan, scope and objectives,
- Audit program,
- Evidences collected.

A template activity plan, which includes the subject, criteria and scope is produced, as well audit matrices to help recording the findings during the IT audit conduct. These matrices are actually taken from the annexes of the WGITA – IDI Handbook on IT Audit for Supreme Audit Institutions and can be used by the auditors as working papers.

The obtained findings can be latter collected in a central point to help the auditor interpreting and judging against the audit questions previously raised at the planning stage. They also form the core of the information to share with the community, along with references for the published audit report, in the project” Control Space of e-Government” (the CUBE), an EUROSAI Initiative.



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2. Preliminary activities and prerequisites to develop the audit

“auditors should obtain an understanding of the nature of the entity/programme to be audited.”

(ISSAI 100 PARAGRAPH 49)

Inside the “ActiveITAuditManual” folder you are going to find an Excel spreadsheet named “StartHere.xlsm” (remember, you must have the macros enabled!). Start with it.

In the first worksheet (named “**Audit Description**”) auditors can describe the audit in more detail, customize it, using available plugins (covered in more depth on **section 6.**) and plan the process himself , by analyzing potential areas and issues, as well identifying risks and problems.

Plugins: Refresh

Revert to Handbook Plugin description Apply Selected Plugin

Title:

Description:

Application Notes:

The lower part of the worksheet provides the user with additional guidance (as pointed out on ISSAI 5300):

- The role and timing of planning;
- Preliminary engagement activities;
- Planning activities;
- Knowledge of the auditee and of the environment;
- Scope of the assessment: Which information systems, which logical, physical or geographical boundaries?
- ·Resources available: Qualified staff or consultants, budgets, timeframes;
- ·Availability of reliable threat statistics and cost figures, appropriate for the local conditions; adaptation of the default values, as necessary;



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- Additional considerations in initial audit engagements.

Preliminary activities and start of planning	
	A1 Preliminary Activities
	01 Preliminary activities
	02 Planning meeting of the IT audit team
	03 Opening meeting with the management of the audited entity
	A2 Planning the Audit
	01 Understanding the entity
	02 Understanding the IT-systems
	03 Input into audit strategy and audit plan

Those activities are aggregated in domains. They are a hyperlink for the corresponding matrix, which will assist the auditor.

Working Paper

SAI IDENTIFICATION		Record:	
		Area:	
		Ref.:	
		Index:	
Audit/Entity:			
Performed by	Date	Reviewed by	Date
Click here to enter text.	dd.mm.yyyy	Click here to enter text.	dd.mm.yyyy
Subject: Preliminary activities			

:

Do the staff assigned to this IT-audit have sufficient competence and required capabilities?
Criteria: ISSAI 5300.8 and 16. - The IT audit team is composed of members that collectively have the competence to perform the IT Audit.
Description:

In particular, the matrix named *02 Understanding the IT-systems*, under preliminary activities domain A2, is also automated. It maps the different IT domains and areas in order to help the auditor perform a preliminary assessment of IT Controls, as stated by ISSAI 5300 21.1. Once used and filled, it can be later synchronized with risk analysis as a suggestion and a guide to auditor judgment.

Pre-audit analysis

The pre-audit analysis' goal is to provide data, which will support risk analysis, i.e. basis for the planning the audit and organising the initial audit folder. The process looks as follows:



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Input

- information obtained from auditee in the pre-audit phase;
- additional relevant data concerning the auditee and their IT systems;
- results of other audits at the auditee or covering similar types of problems.

Steps

1. Analyse available input data.
2. Generate the form *A2.02 Understanding IT systems* – it will depend of the type of IT audit you perform – standard *IT Audit Handbook* based or *Plug-in* based. The form will be generated automatically after clicking the *A2.02 Understanding IT systems*, and will take into account the basis of the IT audit.
3. Decide about qualifications of relevant fields in the form *A2.02 Understanding IT systems*.

Preliminary Assessment of IT Controls (ISSAI 5300-21.1)	
Suitable mechanisms are in place and functioning	
Ensure IT Governance:	
Please, link here the auditee answer(s)...	
Responsibilities defined:	High
Adequate structure:	High
Sufficient regulation:	High
Explanatory and clear documentation:	Medium
Business Needs Identification, Direction and Monitoring:	Medium
IT Strategy and Planning:	Low
Organisational structures, Standards, Policies and Procedures:	High
People and Resources:	High
Risk Assessment and Compliance mechanisms:	High
Ensure IT Operations:	
Please, link here the auditee answer(s)...	
Responsibilities defined:	Medium
Adequate structure:	High
Sufficient regulation:	Low

4. Map the pre-audit analysis results to the risk analysis grid. For this particular step the user must, at first, access the “Plan” worksheet and press the action button “Get Areas and Issues” to obtain the information about different IT domains which will assist the IT auditors in identifying potential auditable areas. At the end of this list his available a new action button, named “Sync Pre-Assessment”. Once pressed, triggers the synchronization process between the information previously collected and evaluated in the pre-assessment and the risk analysis.



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(mark the issue that you want to make part of the audit in the corresponding checkbox)

	Area	Issue	Risks (Weight)	Include in Audit	Reasons, risks and remarks
01. IT Governance	01 Business Needs Identification, Direction and Monitoring	01 Defining IT requirements	2 - Medium	<input checked="" type="checkbox"/>	Pre-Assessment: Domain - High; Area - Medium;
		02 Leadership	2 - Medium	<input checked="" type="checkbox"/>	Pre-Assessment: Domain - High; Area - Medium;
		03 IT Investments	2 - Medium	<input checked="" type="checkbox"/>	Pre-Assessment: Domain - High; Area - Medium;
	02 IT Strategy and Planning	01 Quality of IT strategy	1 - Low	<input checked="" type="checkbox"/>	Pre-Assessment: Domain - High; Area - Low;
		02 Risk management	1 - Low	<input checked="" type="checkbox"/>	Pre-Assessment: Domain - High; Area - Low;
	03 Organisational structures, Standards, Policies and Procedures	01 Structure of the IT Organization	3 - High	<input checked="" type="checkbox"/>	Pre-Assessment: Domain - High;
		02 Policy and procedures	3 - High	<input checked="" type="checkbox"/>	Pre-Assessment: Domain - High;
	04 People and Resources	01 HR and logistics	3 - High	<input checked="" type="checkbox"/>	Pre-Assessment: Domain - High;
	05 Risk Assessment and Compliance mechanisms	01 Mechanism	3 - High	<input checked="" type="checkbox"/>	Pre-Assessment: Domain - High;
		02 Compliance	1 - Low	<input type="checkbox"/>	
02. IT Operations	01 IT Service Continuity management	01 Key parameters	1 - Low	<input type="checkbox"/>	
		02 Compliance	1 - Low	<input type="checkbox"/>	
		03 Effectiveness	1 - Low	<input type="checkbox"/>	

- Complete the risk analysis by applying professional judgement and thus receive the new audit folders.

The pre-audit analysis can be helpful in preparation of the audit and in more precise risk analysis. The tool will work, however, even if the analysis is not performed, which means the risk analysis is based on the professional judgment only.

3. Plan on a risk assessment based selection (map domains, areas and issues, design the audit)

SELECTION OF ISSUES

“The scoping of IT Audit would involve deciding the extent of audit scrutiny, the coverage of IT systems and their functionalities, IT processes to be audited, locations of IT systems to be covered and the time period to be covered.”

(WGITA – IDI HANDBOOK ON IT AUDIT FOR SUPREME AUDIT INSTITUTIONS)

The auditors should select the audit areas and issues through the planning process by analyzing potential areas and issues, as well identifying risks and problems.

As soon as you open the Excel spreadsheet “StartHere.xlsm” you will find a worksheet named “Plan”. It establishes the mapping table of different IT domains which will assist the IT auditors in identifying potential auditable areas.

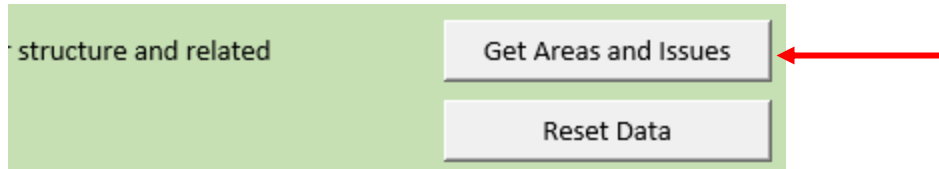
18			
19			
20			
21			
22			

← → **Plan** +



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Press the action button “Get Areas and Issues” to obtain the information. At this stage, auditors must consider which areas and issues are significant as well auditable within the SAI’s mandate.



This button is used to extract the information from dependent subfolders and documents. So, any modification performed by the SAIs in accordance with their own standards will be reflected in the table.

Domain	Area	Issue	Weight	Include in Audit	Remarks
01 IT Governance	01 Business Needs Identification, Direction and Monitoring	01 Defining IT requirements	1 - Low	<input type="checkbox"/>	
		02 Leadership	1 - Low	<input type="checkbox"/>	
		03 IT Investments	1 - Low	<input type="checkbox"/>	
	02 IT Strategy and Planning	01 Quality of IT strategy	1 - Low	<input type="checkbox"/>	
		02 Risk management	1 - Low	<input type="checkbox"/>	
	03 Organisational structures, Standards, Policies and Procedures	01 Structure of the IT Organization	1 - Low	<input type="checkbox"/>	

As you can see, a table with the different IT domains and respective areas and issues is obtained.

The domain name is itself a hyperlink to html help, which provides a graphical description (mind map diagram) of the selected domain. The guidance provided on each domain may help the auditor plan their audits.

In this table the user starts **marking** (to include in audit) **and scoring the appropriate issues** (weight) for the selected audit focus.

01 Defining IT requirements	2 - Medium	<input checked="" type="checkbox"/>
02 Leadership	1 - Low	<input type="checkbox"/>
03 IT Investments	3 - High	<input type="checkbox"/>
01 Key parameters	3 - High	<input checked="" type="checkbox"/>
02 Compliance	3 - High	<input checked="" type="checkbox"/>
03 Effectiveness	1 - Low	<input type="checkbox"/>

Note: a high score (3) marks automatically the issue



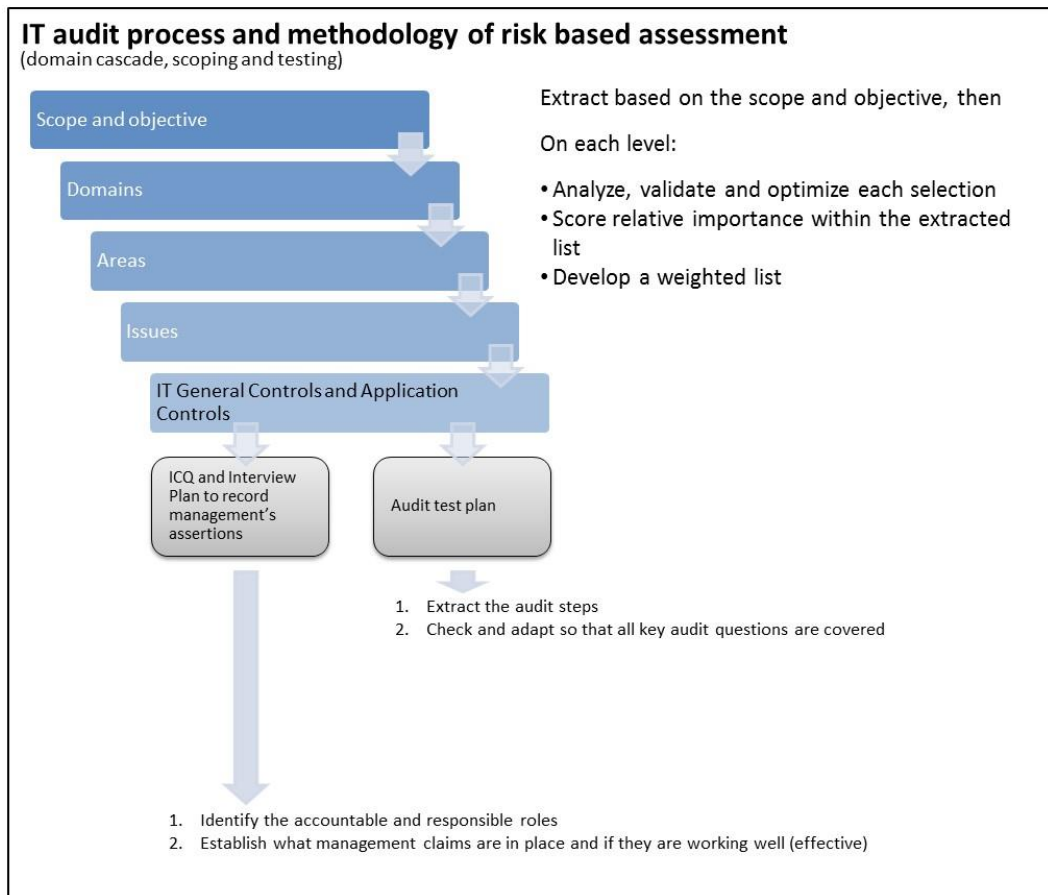
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We call it **scoping through IT domain cascade**: identify a specific domain or a combination of domains, the most critical areas and issues, based on audit scope and objectives, in order to enable efficient and effective use of limited audit resources.

This includes:

“understanding of internal controls, as well as objectives, operations, regulatory environment, systems, and business processes involved. Every control area is based on a set of control objectives that an organisation puts in place in order to mitigate a control risk. The role of the auditor is to understand the potential business and IT risks facing the audited entity and in turn to assess whether the deployed controls are adequate to meet the control objective”

(WGITA – IDI HANDBOOK ON IT AUDIT FOR SUPREME AUDIT INSTITUTIONS)



At this level, is obtained:

- The relative importance of the marked IT-related issue concerning the IT-related area and domain (keep in mind the domain cascade); and



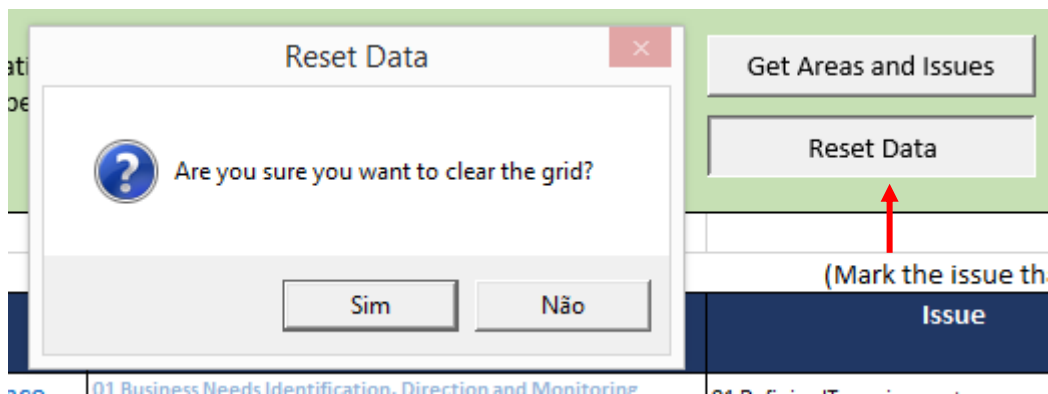
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- The final importance of the IT-related issues (a collection of relative importance that should reflect in the end the objective, scope and answer the audit questions).

Formal techniques, such as risk analysis or problem assessments, possible sources of evidence, auditability and significance of the issue considered, that can help the planning process can be recorded in the **remarks** column. Later, the auditor will get more assistance through the audit matrices

The key idea is to help the auditor to acquire sufficient knowledge about the audit objective and scope, discuss and mature it, ensuring therefore a proper plan.

At any time, the auditor may clear the grid and restart the whole process pressing the action button “Reset Data”.



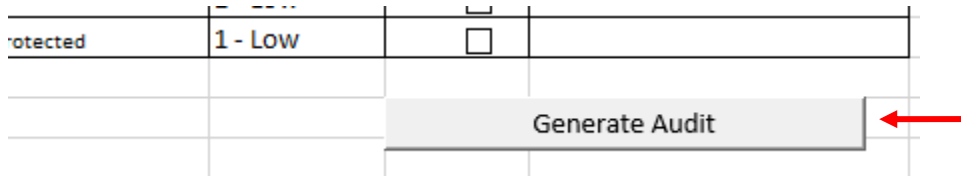
The user should analyze the result and adjust where necessary.

Then, he must select the action button “Generate Audit” (positioned at the end of the list) to carry over to the next step:

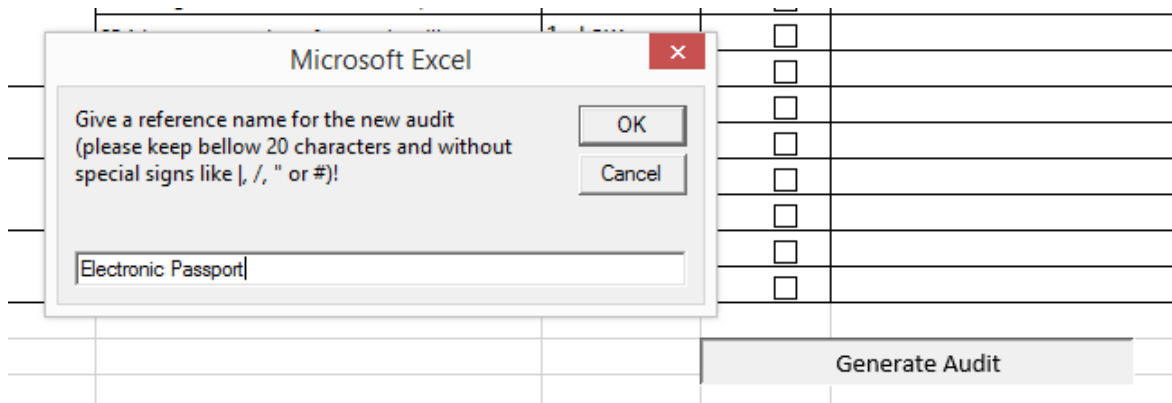
- The creation of the IT audit specific data structure, populated with the marked domains, areas and issues;
- Bound with working papers and matrices that support the definition of the adequate assessment procedures; and
- Metrics.



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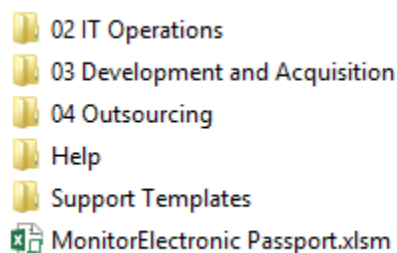
The system will prompt the user for a reference or short IT audit name. This one will be used to create the main folder in the selected path. To minimize future OS file management problems please keep the audit name or reference below 20 characters and without special signs like |, /, "" or #!".



Once pressed the "Generate Audit" action button and inserted the reference, the tool will:

- Build the folder structure with the prefix "IT Audit" + <reference> at root;
- Copy the specific information concerning the marked areas and IT issues (as well help and support materials);
- Change the name of the Excel spreadsheet "StartHere.xlsm" to prefix "Monitor" + <reference> inside root folder.

You can see in the following image the example of an audit generated from the tool, containing only three areas and the worksheet already with the new name:





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DESIGNING THE AUDIT

“Micro planning involves the development of a detailed audit plan for audit of the selected audit entity beginning with outlining the audit objectives” ... “Micro level planning requires an understanding of the organization and some preliminary assessment of controls to facilitate detailed audit planning.”

(WGITA – IDI HANDBOOK ON IT AUDIT FOR SUPREME AUDIT INSTITUTIONS)

“Auditors should plan the audit in a manner that contributes to a high-quality audit that will be carried out in an economical, efficient, effective and timely manner and in accordance with the principles of good project management.”

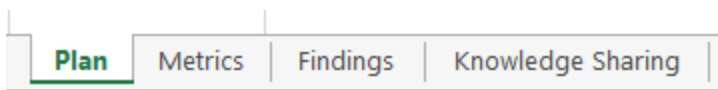
(ISSAI 300 PARAGRAPH 37)

The spreadsheet “Monitor” + <reference>, inside audit root folder, presents from now on a different structure:

- New action buttons appear in the “Plan” worksheet to help auditor prepare the detailed audit programs;
- The table with the different IT domains and respective areas and issues only presents the marked ones during the previous stage, as well the respective weights;

Plan and monitor: IT audit on Electronic Passport					
Get information from audit folder structure and related working papers		Get Areas and Issues	Generate Audit Programme		
		Reset Data	Generate Memo		
(Mark the issue that you want to make part of the documentation in the corresponding checkbox)					
Domain	Area	Issue	Weight	Include in Doc.	Remarks
02 IT Operations	01 IT Service Continuity management	01 Key parameters	3 - High	<input type="checkbox"/>	
		02 Compliance	3 - High	<input type="checkbox"/>	
03 Development and	02 Project Management and Control	02 Control IT projects	2 - Medium	<input type="checkbox"/>	
	04 Solicitation	01 Plan or procedure of solicitation activ	3 - High	<input type="checkbox"/>	
04 Outsourcing	01 Outsourcing Policy	01 Policy on outsourcing	3 - High	<input type="checkbox"/>	
	03 Vendor or contract Management	01 Vendor or Contractor Monitoring	2 - Medium	<input type="checkbox"/>	
	10 Back up and disaster recovery for outsourced services	01 Back up and disaster recovery for out	3 - High	<input type="checkbox"/>	

- Three new worksheets are generated, covering basic statistical analysis and different steps of the audit process.





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Focusing on the table, the IT issues are now a hyperlink for the corresponding matrix, which will assist the auditor as a starting point to assess the controls that the organization has put in place to manage at an acceptable level and mitigate the risks they face in the domain/area.

For more information, please see Annex 1 of WGITA – IDI Handbook on IT Audit for Supreme Audit Institutions (pgs. 22-23).

Use of audit matrix, generation of audit programs

The typical format for the audit matrix provided by the tool, as defined by the WGITA – IDI Handbook on IT Audit for Supreme Audit Institutions, is as below:

AUDITABLE AREA	
Audit objective:	
AUDIT Issue:	
Criteria:	
Information Required	Analysis Method(s)
Audit Conclusion	
To be filled in by auditor:	

The suggested audit matrices cover the IT auditing process. They outline important Audit issues, criteria, analysis methods under the different IT Audit domains/areas.

The matrices should be prepared at the planning stage, however the contents can be updated during IT audit process, if necessary.

Tips, examples and best practices are included in grey to guide the auditor. They can and should be replaced/extended with the appropriate information for the particular audit:



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Analysis Method(s)

....

Check whether data backup and recovery practices are consistent with the entity’s BCP standards.

Check if the Business Process Owners have signed on the agreement. Interview sample of users to understand the awareness.

....

The audit matrices are MS Word documents (.docx format). Their internal columns contain “content controls” that act as pointers to generate the audit programs. So, the auditor has the possibility to replace the information in grey zones with the appropriate one, extending it if necessary and/or changing text formats and styles, but **must preserve the content controls (future automations depend on them)**.

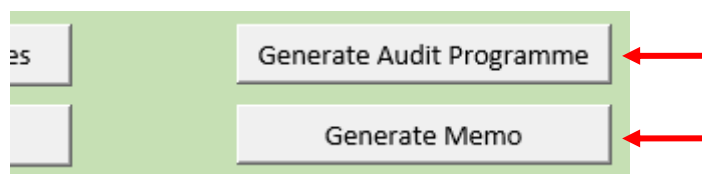
Meeting with the ISSAI requirements related with the planning stage of audit process, the tool generates audit programs, populated with the data previously recorded in the audit matrices, and ensures that they are preserved in standard containers to enable subsequent verification of the audit analysis procedures.

The auditor must mark the issue that he wants to include as part of the documentation in the corresponding checkbox.

(mark the issue that you want to make part of the documentation in the column)

Issue	Weight	Include in Doc.	
01 Key parameters	3 - High	<input checked="" type="checkbox"/>	
02 Compliance	3 - High	<input checked="" type="checkbox"/>	
02 Control IT projects	2 - Medium	<input checked="" type="checkbox"/>	
01 Plan or procedure of solicitation activity	3 - High	<input type="checkbox"/>	
01 Policy on outsourcing	3 - High	<input type="checkbox"/>	

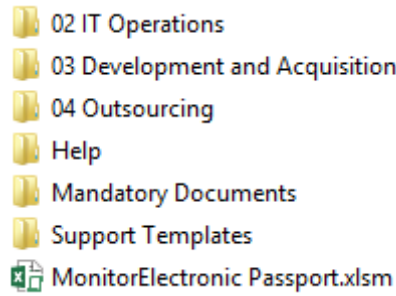
Currently, two documents are supported, the audit programme and the memo, both generated by the auditor when pressing the matching action button:





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They should be stored in a new subfolder, named “Mandatory Documents”, under the root folder of the audit (prefix “IT Audit” + <reference>).



Despite the fact that the audit programme and the memo are produced at the audit planning stage, they include different features. In fact, the memo is more exhaustive than the audit programme.

Compare audit programme with memo

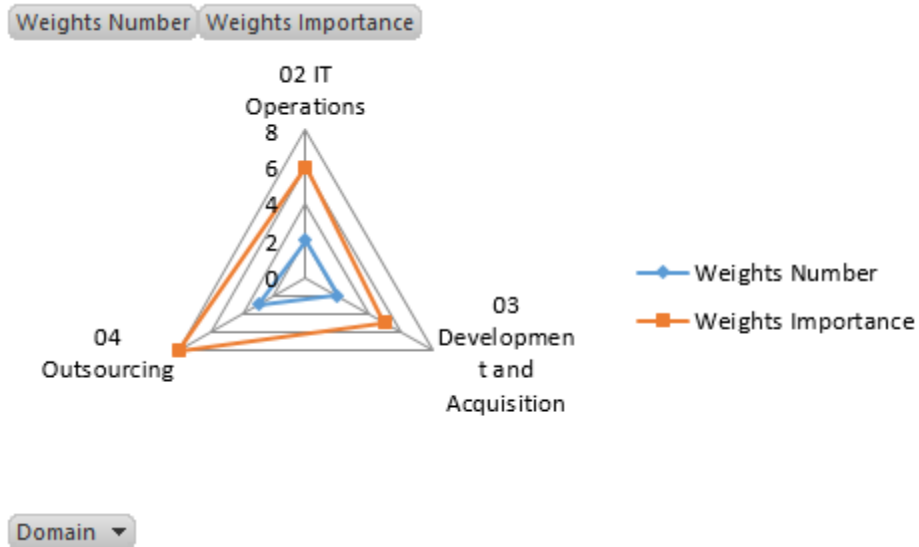
Feature	Audit Programme	Memo
Audit objective	●	●
Audit Issue	●	●
Criteria	●	●
Information Required	●	●
Analysis Method(s)	●	●
Audit Conclusion		●



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Metrics

By making use of MS Excel analytical and graphical features, the tool provides the auditor with a simple range of data (“Metrics” worksheet), including the evaluation of domain importance and characterization.



Again, the auditor should consider the analysis part of the worksheet as a starting point. We encourage to develop new and more appropriate reports in response to SAI or audit specific needs.



4. Conduct (collect and consolidate obtained findings)

EVIDENCE, FINDINGS AND CONCLUSIONS

“Auditors should obtain sufficient appropriate audit evidence to establish findings, reach conclusions in response to the audit objectives and questions and issue recommendations.”

(ISSAI 300 PARAGRAPH 38)

Collect findings

To assist the auditor collecting evidences and suitable conclusions derived from the assessment the tool provides a matrix with the following structure:

Finding	
Description	Start writing here
Legal Act	Start writing here
Paragraph	Start writing here
Domain	Select an Item
Area	Select an Item
Issue	Select an Item
Name the Cause	Start writing here
Name the Result	Start writing here
Reference to the report	Start writing here
Impact	Select an Item Select an Item Select an Item
Management Functions	Select an Item Select an Item Select an Item
Process Control	Select an Item Select an Item Select an Item
Basic Conditions	Select an Item Select an Item Select an Item



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This document, a MS Word document, is available through the “Findings” worksheet, action button “Create Findings Document”. The same logic applies as in the other audit matrices provided:

- Their internal columns contain content controls that act as pointers to consolidate centrally the findings;
- The auditor has the possibility to replace the information in grey zones with the appropriate one, extending it if necessary and/or changing text formats and styles, but **must preserve the content controls**.

If the auditor wants to record more than one finding in a document only needs to copy and paste the complete table, or he can create another document pressing the action button “Create Findings Document”. Copies of documents are also allowed, since the tool will read the internal table and application controls IDs.

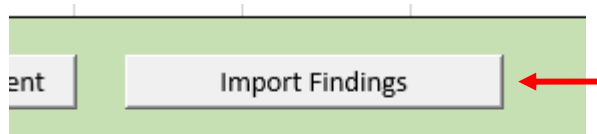
These matrices should be stored in a new subfolder, named “Mandatory Documents”, under the root folder of the audit (prefix “IT Audit” + <reference>).

Consolidate findings

The table inside the worksheet “Findings” is intended to collect centrally and consolidate the findings derived from the assessment.

1	Create and save the findings documents in "Mandatory Documents" folder in order to import them later											
2						Create Findings Document	Import Findings					
3												
4	Domain	Area	Issue	Risk Case Cause	Result	Findings	Reference to the report	Impact (1)	Impact (2)	Impact (3)	Management function (1)	Management
5												
6	Test Domai	Test Area	Test Issue	Cause Test	Result tes	Test Descrip	Reference Test	information	mission	accountabilit	logistics	governance
7												

It’s populated with the data previously recorded in the findings matrices when the auditor presses the matching action button:





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The findings table allows the auditor to come back later, change the content, add remarks or references.

Please note, changes made in the contents of the table are not automatically written back in the matrices. It's possible to extend the content directly, nevertheless the auditors are strongly invited to add new findings through the matrices, since they are preserved in standard containers and enable subsequent verifications of the audit analysis procedures, thus meeting ISSAI requirements.



5. Share (prepare to make accessible in “Control Space of e-Government”)

DISTRIBUTION OF THE REPORT

“The IT auditor should report on their findings in a timely manner and should be constructive and useful to the audited entity as well as meaningful to other stakeholders. The report could be submitted to appropriate authorities as per the mandate of the SAI and the IT Audit.”

(WGITA – IDI HANDBOOK ON IT AUDIT FOR SUPREME AUDIT INSTITUTIONS)

“The audit process involves preparing a report to communicate the results of the audit to stakeholders, others responsible for governance and the general public.”

(ISSAI 100 PARAGRAPH 51)

The obtained findings form the core of the information to share with the community, along with references for the published audit report, in the project “Control Space of e-Government” (the CUBE), an EUROSAI Initiative.

The Project “Control Space for e-Government Audit”

As the EUROSAI IT Working Group website (<http://eurosai-it.org/>) states, “Control Space for e-Government Audit project is a tool (currently known as “**The Cube**”) meant to facilitate audits of e-government. The tool is being developed by several SAIs from the EUROSAI IT Working Group. It is intended to be an “intelligent” internet database of e-government audit reports from various SAIs, from which you can easily access information not only on other SAIs’ reports on e-government audits, but also articles, presentations, methodologies, databases and other materials. The idea is not only to gather interesting resources of information but also to provide them together with basis analysis – for the time being we classify topics, management functions, risk cases and projects’ goals. We hope that it will make it easier to quickly find an interesting piece of information. This database of documents is designed mainly for public auditors working in the e-government area, but everybody who is interested in modern IT auditing is welcome.”

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The auditors, as well the citizens in general can access “The Cube” through the following URL:

<https://egov.nik.gov.pl/>

Generating the index document

The tool offers the possibility to create smoothly the index document that will be ingested by the EUROSAI databases, along with the published audit report (or at least his URL).

In the “Knowledge Sharing” worksheet the auditor will find a data input form that concentrates important information necessary to audit retrieval and characterization. The form is structured in four major areas:

Basic SAI Information		
Organization	SAI Identification	Name of institution which report relates to
	Acronym (e.g. KLSH)	Acronym of the institution
	www site	Webpage of the institution
	Country	Choose country code from dropdown box (based on ISO-3166 alpha-2 standard)

Basic summary information in English		
Front page Report HEADLINE	In bold	First sentence/part of the headline
	Text	Headline of the report (like a newspaper lead) for the front page of the databases

Basic report information		
Report	Title	Title of the Report in English
	Short Description	Short description of the Report (what was the report main goals)
	Year	Year when the report was published
	Document’s ID	Original identification number of the report
	Type	Type of the Report selected from dropdown box (e.g. Full Translation, Original, Presentation or Summary)
	Language	choose country code for language of the Report from dropdown box (based on ISO-639-1 standard)
	www URL	URL or hyperlink to original report file (source)
	File name	Name of the original report file

Basic Analysis	
Topic(s)	Select the name of the topic with which the report subject relates (maximum three)
State Activity Areas	Choose particular activity area with which the report subject relates



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Once filled, the auditor can generate the index document pressing the action button “Generate XML (Cube)”, located at bottom:

3#	<input type="text" value="Application Controls"/>
<input type="button" value="Generate XML (CUBE)"/>	

A screenshot of a web form. The top row has a green background and contains a text input field with the value '3#' and another text input field with the value 'Application Controls'. Below this is a row with a grey background containing a button labeled 'Generate XML (CUBE)'. A red arrow points to the right side of this button.

A well-formed and valid XML file will be produced, combining data from input form and findings, in subfolder “Mandatory Documents”, under the root folder of the audit (prefix “IT Audit” + <reference>).



6. The use of plugins

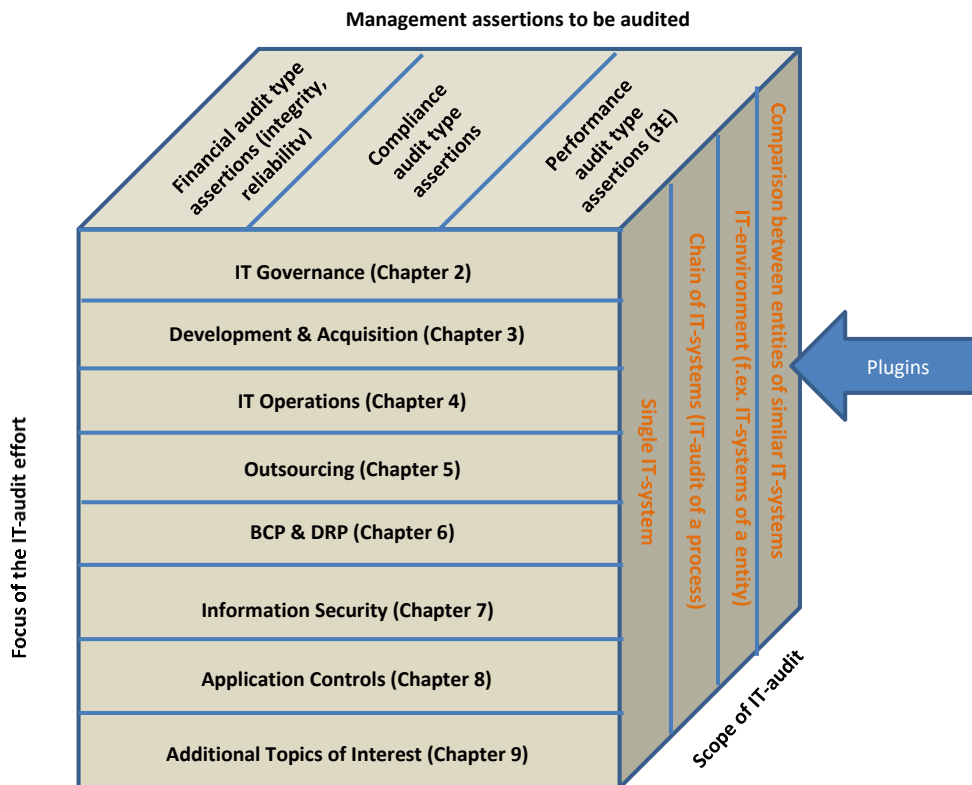
CONCEPT

In Active IT Audit Handbook, a plugin (or plug-in, or extension) is a component that adds a specific feature to the “standard” Handbook on IT Audit for Supreme Audit Institutions. As the tool supports plugins, it enables customization or the add of new features.

The common examples are the template activity plans produced for specific IT audits, which includes the subject, criteria and scope produced, as well audit matrices to help recording the findings during the IT audit conduct. In this sense, an audit created from scratch for a specific subject and scope, with matrices parameterized in a specific way, can be reused later by the tool as a plugin, thus allowing the share and reuse of knowledge.

The plugins can be seen in the overall context of the tool as follows:

Figure 1. Cosoistic view of IT-Audit in Government





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In the future, the plugin will be used to add new features and update the Handbook on IT Audit for Supreme Audit Institutions (SAI's), highlighting emerging areas of interest and providing the users with essential information and key questions needed for an effective planning of IT Audits.

PURPOSE AND EXAMPLES

Applications support plugins for many reasons. Some of the main reasons include:

- To enable third-party SAI's to create abilities which extend or customize an application;
- To support easily adding new features;
- To reduce the size of an application;
- To promote good practices and patterns in audit, focusing on particular topics;
- To share and reuse knowledge among auditors in SAI or between SAI's;
- To address new and merging areas of interest for IT auditors, like cloud computing, Web Services or OPEN DATA initiatives.

MECHANISM

The tool provides services and services that the plugin can use, including a way for plugin to register themselves with the tool and a defined structure for the exchange of data with plugins.

A plugin still depend on the service and the structures provided by the tool and do not usually work by himself. Conversely, the tool operates independently of the plugin, using the "standard" Handbook on IT Audit for Supreme Audit Institutions as operational and informational basis, making it possible for end-users to add and update plugins dynamically without needing to make changes to the host tool.

The Active IT Audit Handbook supports two types of plugins:

- Standard plugins, reflecting the core Handbook structure;
- Standalone plugins, and free form, reflecting only general structure of the core Handbook.

Nevertheless, some simple rules must be followed:



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- Enclose the plugin content inside a main or root folder, called with a short name or reference.

As an option, reserve the complete name and other practical details of the plugin for the “Title” and “Description” fields in the “audit Description” sheet, available at Excel spreadsheet named “StartHere.xlsm”.

Plugins: Refresh

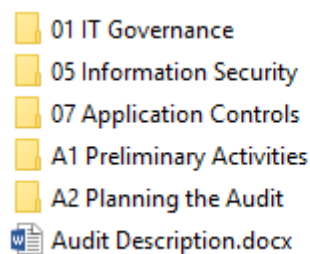
Revert to Handbook Plugin description Apply Selected Plugin

Title:

Description:

In this case, include also the spreadsheet inside the plugin main folder.

A typical structure of a plugin can be seen in the next image (plugin “Open Data Strategy”):



To minimize future OS file management problems please keep the plugin name or reference below 30 characters and without special signs like |, /, "" or #!"

- Respect the mapping table of different IT domains, areas and issues (linked with matrices) which will assist the IT auditors.

The tool relies in a structure of folders and subfolders defining domains and areas, as well in file documents, inside areas subfolders, that produce the issues and are in fact the audit matrices.

New plugins should always comply with **domain folder > area subfolder > issue file**.



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Accordingly, generate a three-level folders structure

- main folder called with a short name of the plugin;
 - first level of the plugin folders – reflecting the IT audit domains as they are defined by the Handbook
 - second level of folders and their content (audit matrix files) may be prepared freely – following a logic of particular audit needs
-
- Prepare a description of the plugin topic in a text editor.

Even if it is not a mandatory requisite is highly advisable to produce a description of the plugin, since it provides the plugin users with the context and the objectives to attend.

The description of the plugin should be prepared in a text editor and saved with the name “Audit Description” in the root folder of the plugin.

Try to use a widely available format, since the opening of this document relies on client applications installed.

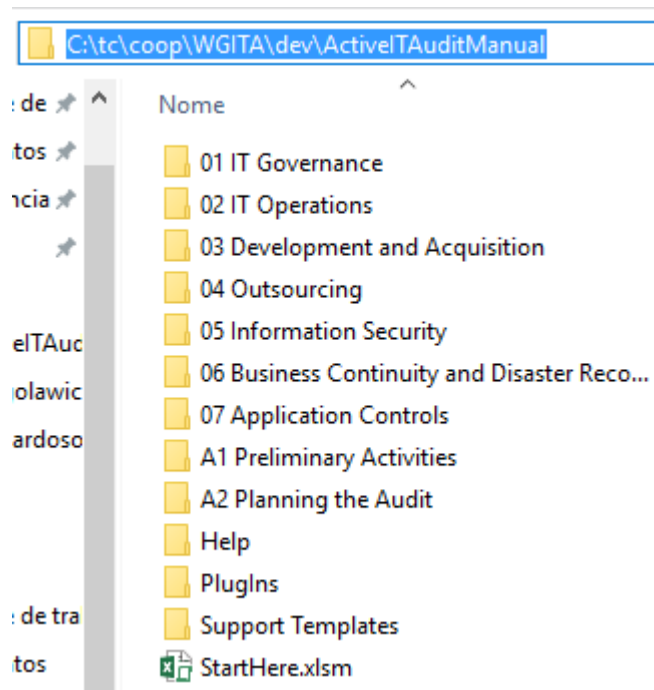


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HOW TO INSTALL AND USE A PLUGIN

The install of plugins is easy. Just follow this step-by-step instructions:

- Navigate to the “ActiveITAuditManual” folder and inside you will find plugin subfolder.



- Copy the main folder plugin and content to this plugin folder
- The plugin is now ready to be used.

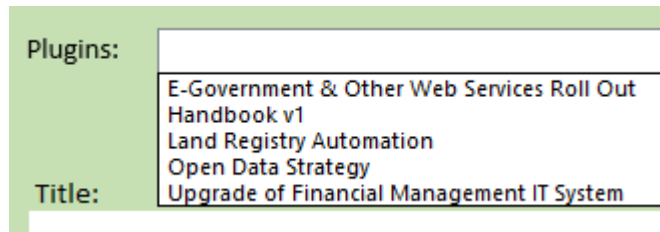
The use of plugins inside the “ActiveITAuditManual” is also concentrated in Excel spreadsheet named “StartHere.xlsm” (remember, you must have the macros enabled!).

As soon as you open the Excel spreadsheet, you will find a first worksheet named “**Audit Description**”. It gives the user the opportunity to provide a complete reference and description of the audit, establish and record information related with preliminary activities and start of planning (matrices under domains “A1” and “A2”), as well the use of plugins installed.

To start using a plugin the user must select it from dropdown control available at the top of the worksheet “**Audit Description**”:



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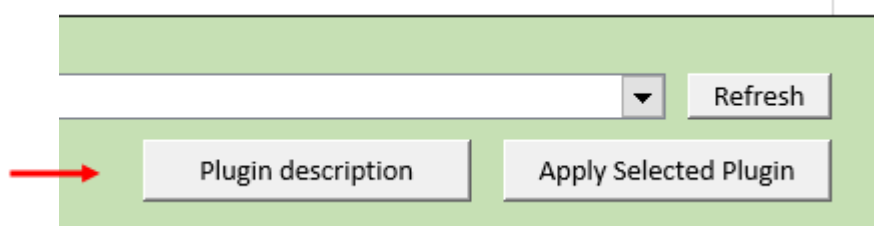


As you can see in the previous image, the “standard” Handbook on IT Audit for Supreme Audit Institutions is himself a plugin.

Note:

If you installed a new plugin with the Excel spreadsheet named “StartHere.xlsm” already open it’s necessary to press the “Refresh button” to list it

If available, the user can access the plugin description pressing the action button “Plugin description”.



The user should analyze the information and think to adjust where necessary.

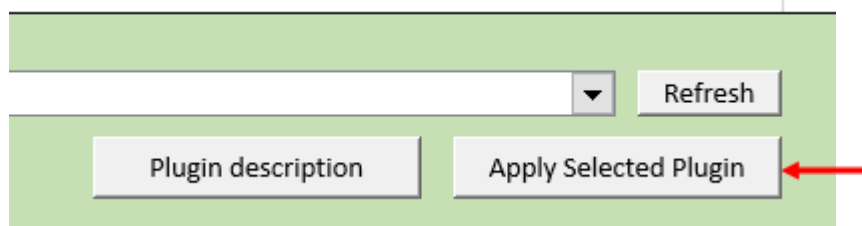
Then, he must select the action button “Apply Selected Plugin” to carry over to the next step:

- The creation of the IT audit specific data structure, populated with the customized domains, areas and issues;



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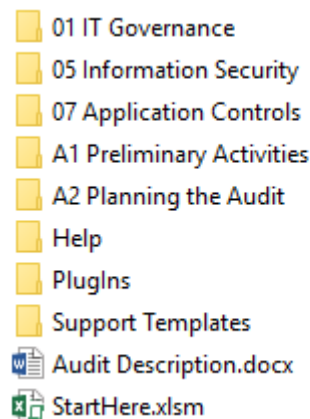
- Bound with matrices that support the definition of the preliminary activities and start of planning (matrices under domains “A1” and “A2”); and,
- Fill, if available a “StartHere.xlsm” file inside the plugin, the title and description fields.



Internally, the tool will:

- Build the folder structure at root;
- Copy the specific information concerning the plugin domains, areas and IT issues (as well help and support materials).

You can see in the following image the example of an audit generated from the plugin, containing only three areas:



To revert to the “standard” Handbook on IT Audit for Supreme Audit Institutions, select the plugin with the name “Handbook v1” or later and apply. Alternatively, you can simply press the action button “Revert to Handbook”.

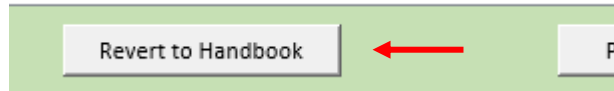


INTOSAI
WGITA



EUROSAI
IT Working Group

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Happy IT Audits!