

e-Government Projects Audit Model



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Background Information

TCA

- Established in **1862**
- **Constitutional** establishment & managed by **its law** and **specific regulations**
- **Collegiate** body with **judicial** function
- Types of Audit
 - **Regularity** Audit
 - ❖ **Compliance** Audit
 - ❖ **Financial** Audit
 - **Performance** Audit

Background Information

Milestones

- Establishment of **Computer-Assisted Audit Group** (1997)
- **First** IT audit (2002)
- **Twinning Project** for Strengthening Audit Capacity of TCA (2005-2007)
- IT audit **guideline** (2007)
- IT audit **training** activities (2007 - ...)
- **Expert** support in conducting **technical tests** (2007 - ...)
- **ITASA** with EUROSAI ITWG (2013)
- Establishment of **IT Audit Group** (2015)
- Audit of **e-Government** projects (2017)



Background Information

TCA

- performs IT audit
 - as a **part** of **regularity** audit *
 - as a **part** of **performance** audit
 - **separately**
 - ❖ public institutions
 - ❖ particular systems/applications
 - ❖ ongoing system development projects
 - ❖ theme-based

Background Information

IT Audit as a part of Regularity Audit

- Assessment of basic level IT controls (by ordinary auditors)
- IT audit (by IT auditors)

Background Information

Assessment of basic level IT controls

- **No need** for **in-depth** IT audit knowledge - performed by ordinary auditors
- Conducted in accordance with «**Regularity Audit Guideline**»
- Conducted in **every** regularity audit
- Determine which business workflows are carried out in the IT environment and outputs of which systems **affect accounting data** and **financial statements**
- **Compulsory** audit procedures relating to IT controls
 - Strategy and policy controls, system development and change management controls, physical and environmental controls, logical access controls, business continuity controls and application controls
- **Control weaknesses** are **reported** along with recommendations

Background Information

IT Audit

- Conducted under the responsibility of «**IT Audit Group**»
- Performed by **IT auditors**
- Conducted in accordance with «**IT Audit Guideline**»
- Separately reported - «**Information Systems Audit/Evaluation Report**»

Background Information

Audit Approach

- Determine the **risks** concerning the examined information systems
- Identify the necessary **control** mechanisms that can minimize these risks
- Check whether these IT controls are **established**, and if so, whether they are **functioning effectively** or **not**
- **Assess** the **weaknesses** in IT controls
- **Report** the obtained findings according to a certain procedure

e-Government Projects

Current Situation

- Transformation of public services to e-Government services by use of ICT
- Modernization and/or integration of e-Government services
 - **Growing number** of e-Government projects

e-Government Projects

Current Situation

- Decision making failures
 - Project requirements not described with sufficient clarity
 - Poor change management
 - Poor risk management
 - Information security requirements neglected
 - Roles and responsibilities not defined clearly
 - Lack of qualified staff
 - Communication failures with stakeholders & suppliers ...
- **Low success rate** in e-Government projects

e-Government Projects

Current Situation

- e-Government projects not audited systematically
- IT audits contribute to the success of e-Government projects
 - **Efficient and generalized audit of e-Government projects**



National e-Government Strategy



2016-2019 National e-Government Strategy and Action Plan

- **Action 1.2.2:** Ensuring efficiency of audit for e-government projects in public sector

Responsible Entity: Turkish Court of Accounts

- A **model** will be created for the audit of e-Government projects
- A **guideline** will be prepared for the audit of e-Government projects
- Audit of e-Government projects will be **generalized** in all public agencies and institutions

Audit Model



Audit of e-Government Projects

- Examination and evaluation of **internal controls**
 - necessary for **successful completion** of e-Government projects
 - within efficiency, effectiveness, confidentiality, integrity, availability, reliability and compliance **criteria**

Audit Model



Audit of e-Government Projects

- On important/critical e-Government projects
- Project success oriented
- Separately
- By IT auditors

Audit Model

Success Criteria

■ Completion

- within defined **scope**
- within given **budget**
- at targeted **time**

■ Ensuring

- user-satisfaction with appropriate **quality**
- **information security** requirements
- **compliance** with national policies, entity strategies and relevant legislation

Audit Model

Audit Criteria

- Information criteria
 - Efficiency
 - Effectiveness
 - Confidentiality
 - Integrity
 - Availability
 - Reliability
 - Compliance

Audit Model

Audit Criteria

- Principles defined in respective regulations on e-Government
 - Transparency
 - Accountability
 - User oriented
 - Participation
 - Creating added-value
 - ...

Audit Model

Audit Steps

- Determine the type and the phase of the project
- Identify the audit areas to examine
- Determine risks
- Identify the necessary controls
- Check whether these controls are established, and if so, whether they are functioning effectively or not
- Detect and assess control weaknesses
- Report material control weaknesses

Audit Model

Project Phases

- Preparation/start *
- Realization *
 - Analysis
 - Design
 - Development
 - Testing
 - Integration/deployment
- Service delivery/completion *

Audit Model

Audit/Control Areas

- IT Governance/Management *
- Project Management *
- Information Security *
- Outsourcing
- Process and Content



Audit Model

Audit/Control Areas

- **IT Governance/Management**
 - Strategic planning
 - Risk management
 - Information security management
 - IT organization/roles and responsibilities
 - Human resources & training

Audit Model

Audit/Control Areas

■ IT Governance/Management

- Asset management
- Project development methodology
- Project management organization
- Internal control & audit
- Compliance with legislation



Audit Model

Audit/Control Areas

- **Project Management**
 - Pre-project studies
 - Integration management
 - Scope management
 - Time management
 - Cost management
 - Quality management

Audit Model

Audit/Control Areas

- **Project Management**
 - Human resource management
 - Communications management
 - Risk management
 - Procurement management
 - Stakeholder management
 - Post-project studies

Audit Model

Audit/Control Areas

- **Information Security**
 - Analysis, design and realization of
 - ❖ System security requirements
 - ❖ Application access rights and controls
 - ❖ Database access rights and controls
 - Security tests
 - Audit trail and logging
 - Automatic application controls

Audit Model

Audit/Control Areas

■ Information Security

- Physical and environmental security
- Network management and security
- Operation systems security
- Database management and security
- Mobile device usage and security
- Web & mobile application security
- Application controls

Audit Model

Audit/Control Areas

- **Outsourcing**
 - Specification
 - Procurement/selection of supplier
 - Contract
 - Supervision and control
 - Examination and acceptance

Audit Model

Audit/Control Areas

■ Process and Content

- Determined according to the type and sub-components of the project
 - ❖ For system development projects SDLC processes
- Operation and maintenance planning
- Business continuity and disaster recovery planning

Audit Model



		PROJECT PHASE		
		Preparation/Start	Realization	Service Delivery/Completion
AUDIT/CONTROL AREAS	IT Governance/Management		<ul style="list-style-type: none"> - Strategic planning - Risk management - Information security management - IT organization/roles and responsibilities <ul style="list-style-type: none"> - Human resources & training - Asset management - Project development methodology - Project management organization <ul style="list-style-type: none"> - Internal control & audit - Compliance with legislation 	
	Project Management	<ul style="list-style-type: none"> - Pre-project studies 	<ul style="list-style-type: none"> - Integration management - Scope management - Time management - Cost management - Quality management - Human resource management - Communications management <ul style="list-style-type: none"> - Risk management - Procurement management - Stakeholder management 	<ul style="list-style-type: none"> - Post-project studies
	Information Security	<ul style="list-style-type: none"> - Information security management system 	<ul style="list-style-type: none"> - Analysis, design and realization of system security requirements - Analysis, design and realization of application access rights and controls - Analysis, design and realization of database access rights and controls <ul style="list-style-type: none"> - Security tests - Audit trail and logging - Automatic application controls - Physical and environmental security 	<ul style="list-style-type: none"> - Physical and environmental security - Network management and security <ul style="list-style-type: none"> - Operation systems security - Database management and security - Mobile device usage and security - Web & mobile application security <ul style="list-style-type: none"> - Application controls
	Outsourcing	<ul style="list-style-type: none"> - Specification - Procurement/selection of supplier - Contract 	<ul style="list-style-type: none"> - Contract - Supervision and control 	<ul style="list-style-type: none"> - Examination and acceptance
	Process and Content		<ul style="list-style-type: none"> - Determined according to the type and sub-components of the project 	<ul style="list-style-type: none"> - Operation and maintenance planning - Business continuity and disaster recovery planning

Audit Model

Progress

- **Done**
 - Model
 - Guideline
 - Pilot audits (3)
- **To-do**
 - Pilot Audits (3)
 - Review of Guideline
 - Generalization

Audit Model

Action Plan for Generalization

- **TCA**
 - Create a toolkit for Regularity Audit Guideline
 - Training for ordinary auditors
- **Internal Audit Units**
 - Adaptation of Guideline
 - Training for internal auditors



***Thank you for
your attention...***

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