



Oifig an Ard-Reachtair Cuntas agus Ciste
Office of the Comptroller and Auditor General

IT Audit, Digital Audit & Data analytics OCAG

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Our unit

- Unit is responsible for both IT Audit and Data Analytics
- Undertake IT Audits using R Studio/PowerBI and IDEA
- Define new applications and methods of analysis to structured and unstructured dataset
- Define standardised approach to data handling and promote a more user friendly data analysis approach

How do we promote our job

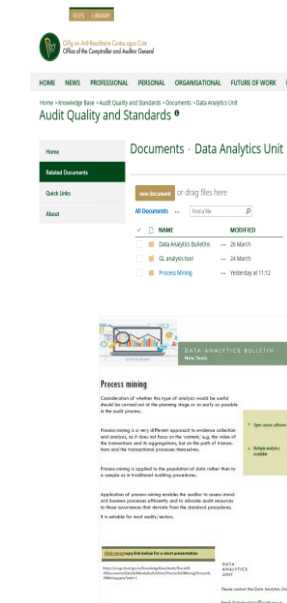
Internal Working Group:

- Members from Audit and Reporting teams that give feedback on tools available or propose additional ones



Intranet dedicated page:

- Repository of training material and tools available.



Bulletin:

- Bulletin describing new tools available that convey elements of Data Analytics literacy.

Weekly drop in Clinic:

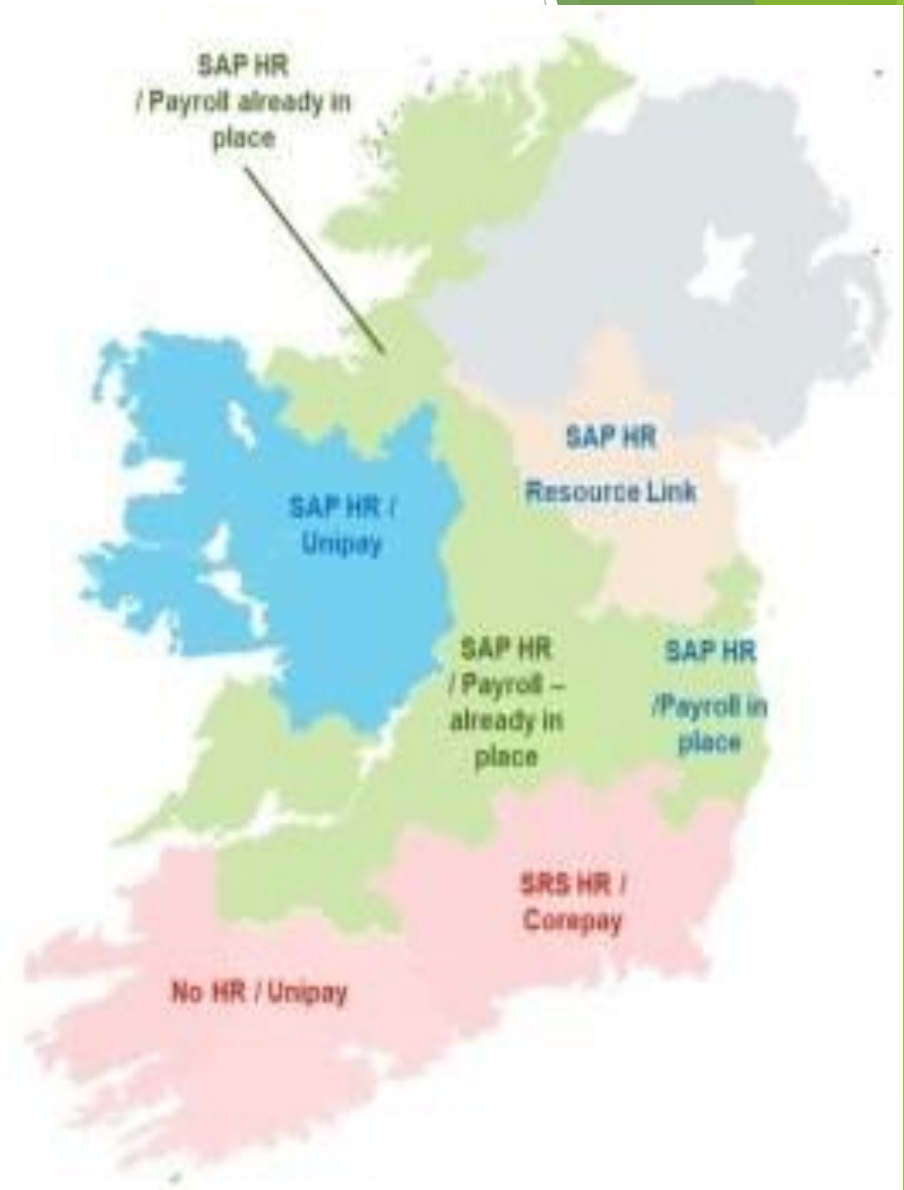
- We are available on site in Mayor Street to meet with staff every Wednesday



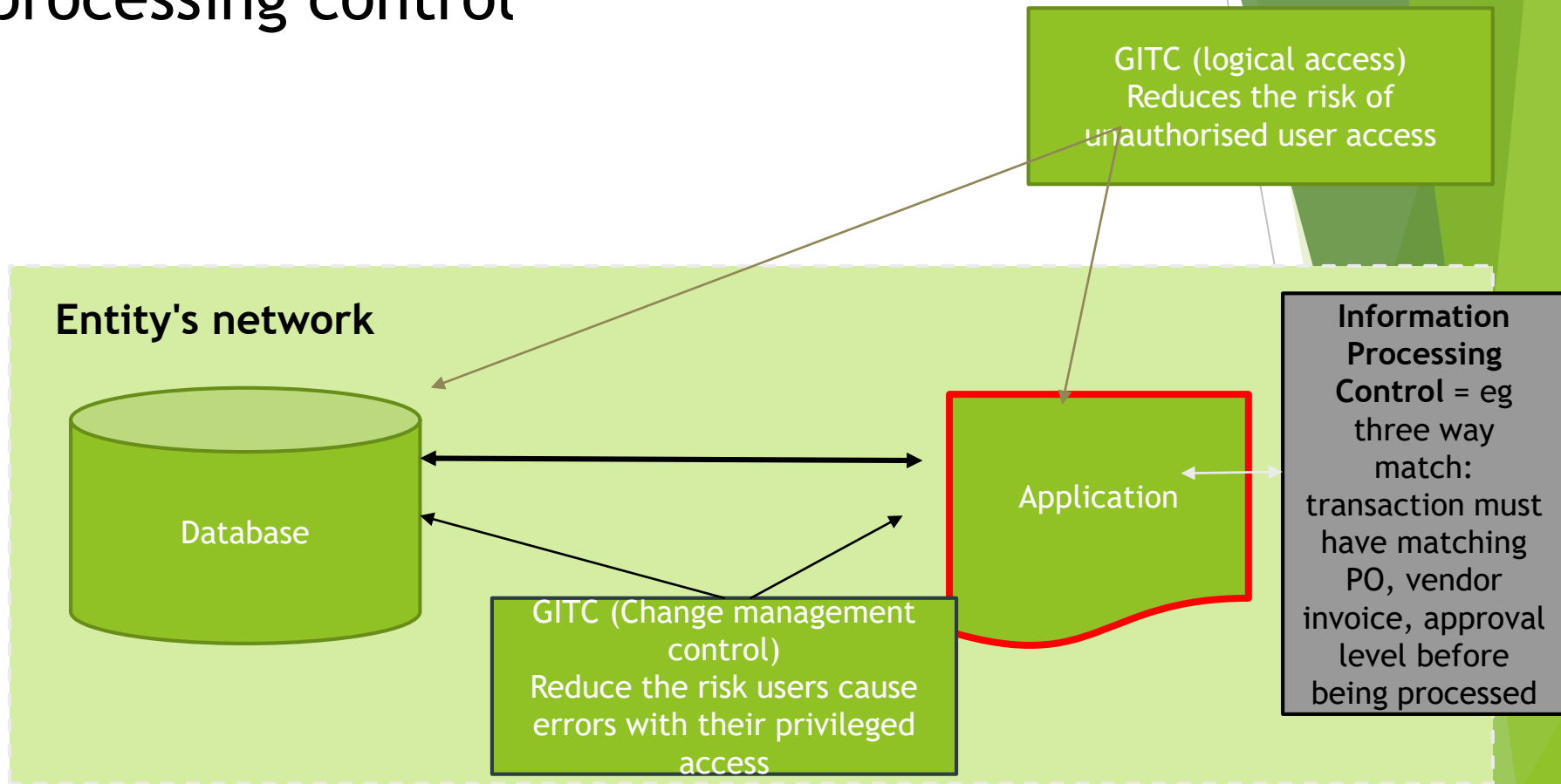
IT Audit - recent projects

HSE

- The objective of this IT audit was to examine the effectiveness of controls within the HSE payroll system including the following
- The procedures, within both IT and manual systems, by which those transactions are initiated, recorded, processed.
- How the information system captures events and conditions, other than classes of transactions, that are significant to the financial statements.



General IT Control versus Information processing control



8 main IT control objectives

- 1) Changes to payroll data - the addition of are received from authorised sources, are valid, complete and are completed accurately.
- 2) Repayment processing is scheduled and performed accurately and completely.
- 3) Amendments to payrolls are authorised and processed.
- 4) Cancelled payments and manual amendments are approved.
- 5) Year end processes are completed accurately and completely
- 6) Changes to the payroll software are documented, authorised, tested and approved prior to being implemented.
- 7) Logical access to the system is restricted to authorised individuals based on business need
- 8) Access to make changes to critical reference data is restricted to authorised individuals based on minimum business need and that changes are processed correctly.

**Conclusion:
Redacted**



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Audit of Application Case Study - Revenue

VAT system

- ▶ The objective of the audit was to examine the threshold approval levels in the operation of the VAT repayments from 1st January to the 31st October 2022 and the effectiveness of controls within the system
- ▶ The procedures, within both IT and manual systems, by which those transactions are initiated, recorded, processed.
- ▶ How the information system captures events and conditions, other than classes of transactions, that are significant to the financial statements. In total the data team received 3 datasets

Datasets

- ▶ Total VAT repayable listing 1st Jan to 31st Oct 2022..
- ▶ Manual Vat approval listing –
- ▶ Staff listing by Grade

Review of input controls

- Evaluate controls built into system transactions over the input of data
- How
 - Verify invalid data is rejected or edited on entry
 - Understand application purpose & identify data integrity risks
 - Discussion with developer
 - Code review
 - Examples
 - Fields intended for numbers should not allow alphanumeric entry
 - Logic checks in transactions i.e. 24 hrs/day or 60 mins/hour
 - Preventing duplicates in unique fields
 - Staff can only approve VAT at predefined level

Review interface controls

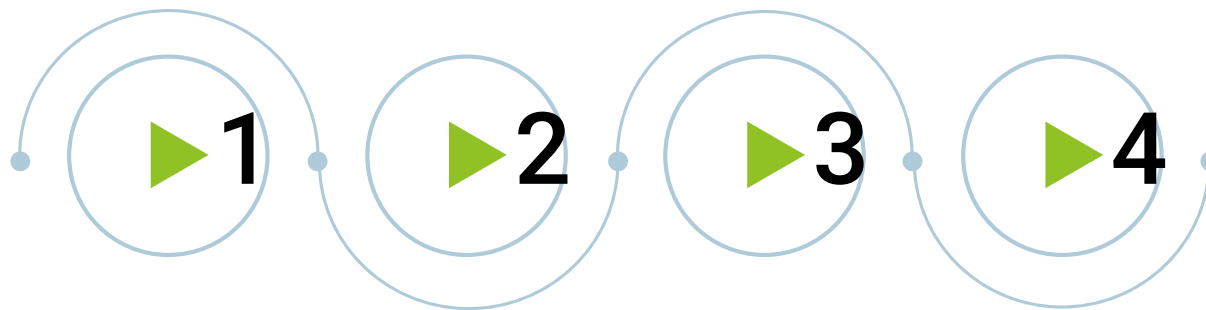
- Evaluate controls in place over data feeds to/from interfacing systems
- Ensure data is transmitted accurately and completely
- How
 - Identify all existing interfaces i.e. System flow diagrams, interviews
 - Determine controls i.e. Code reviews, interviews
 - Control totals i.e. Hash totals, record counts
 - Review evidence applicable error reports are reviewed and acted upon
 - Suspense files to handle the errors
 - Reconciliation reports

Conclusion: redacted



ISA 315
implements a minimum
requirement for auditors to
document their understanding of
the role of IT in the transactions
and processes relevant for the
audit.

IT General Controls Review - Audit Process



▶ Understand and identify the IT Environment and systems to be reviewed

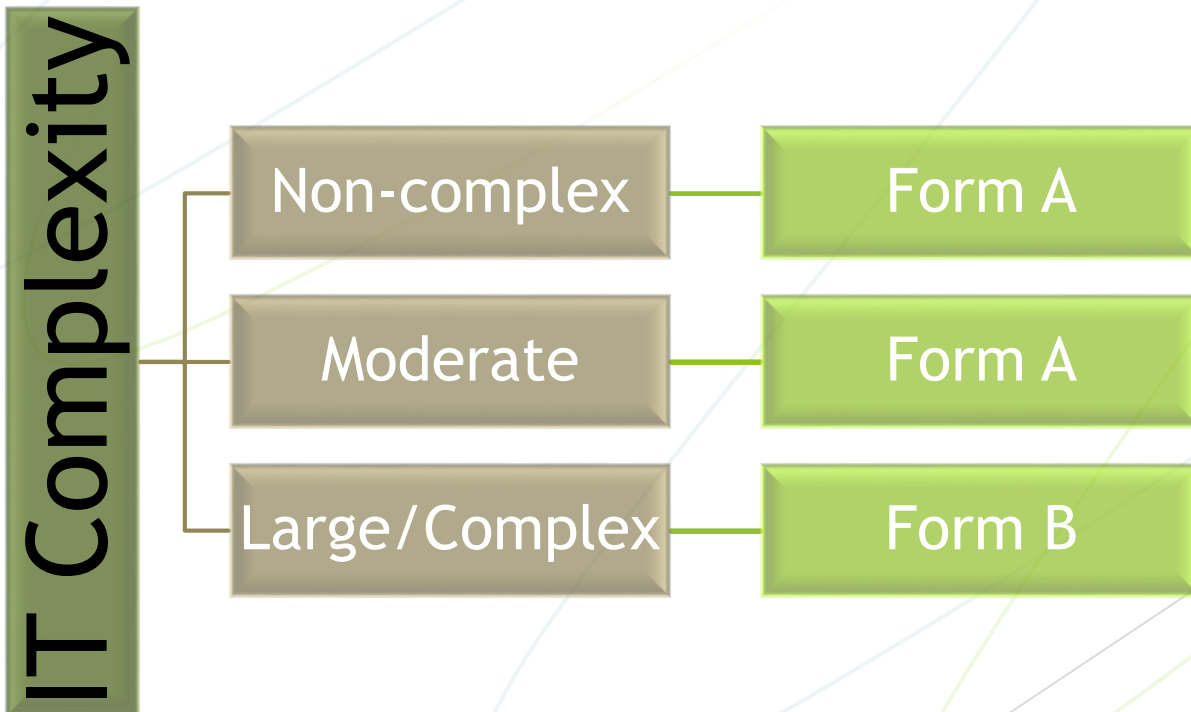
▶ Perform interviews, walkthroughs, and documentation reviews to gain an understanding on processes

▶ Assess appropriateness of existing control environment (control design)

▶ Validate existing controls to assess control operating effectiveness

ISA 315 - IT Controls

Result - depending on what you have entered for questions 1 - 16 it will give you a score which indicates if Non-complex, Moderate or Large. You then complete ITGC based on that result.



Project VFM - Cyber Security

An examination to assess the adequacy of the systems that the Department has put in place to protect the public sector from cyber attacks with a particular focus on

- resources
- implementation of cyber security objectives and measures
- governance and oversight arrangements
- management systems



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END SLIDE