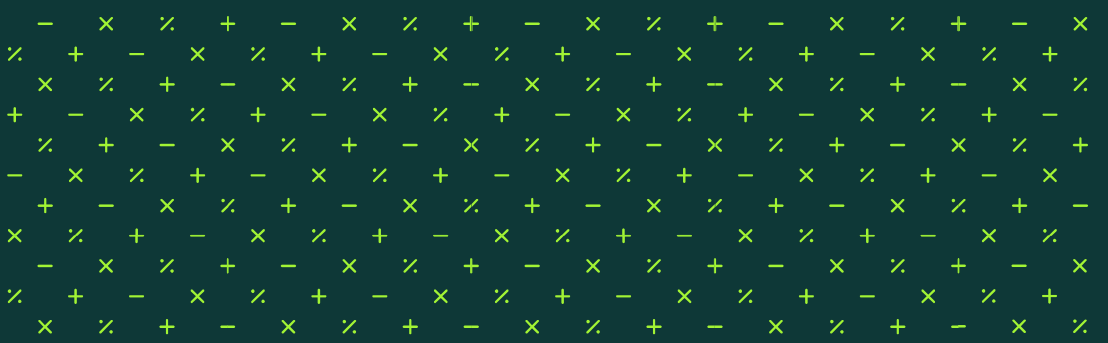
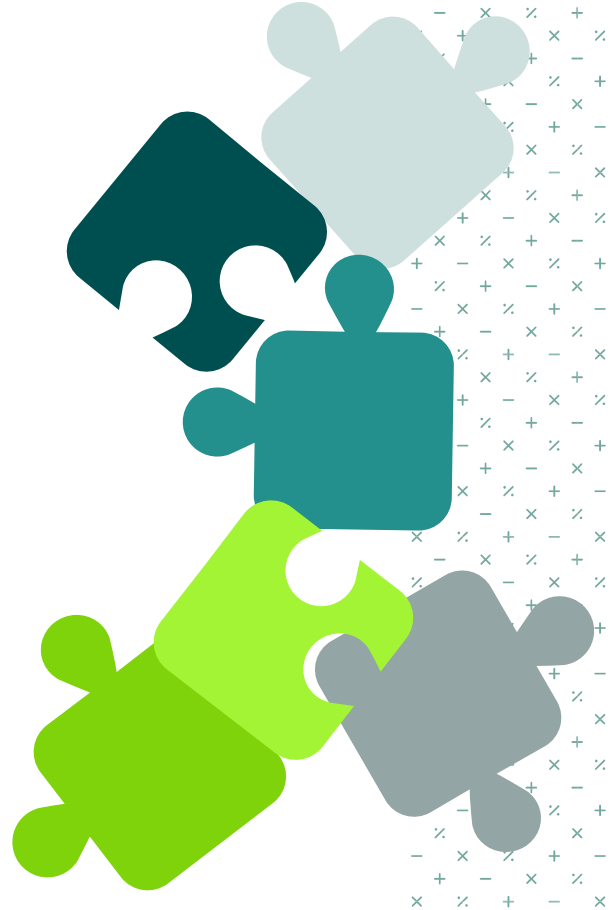


No Utility is Too Big or Too Small for Solid Internal Controls

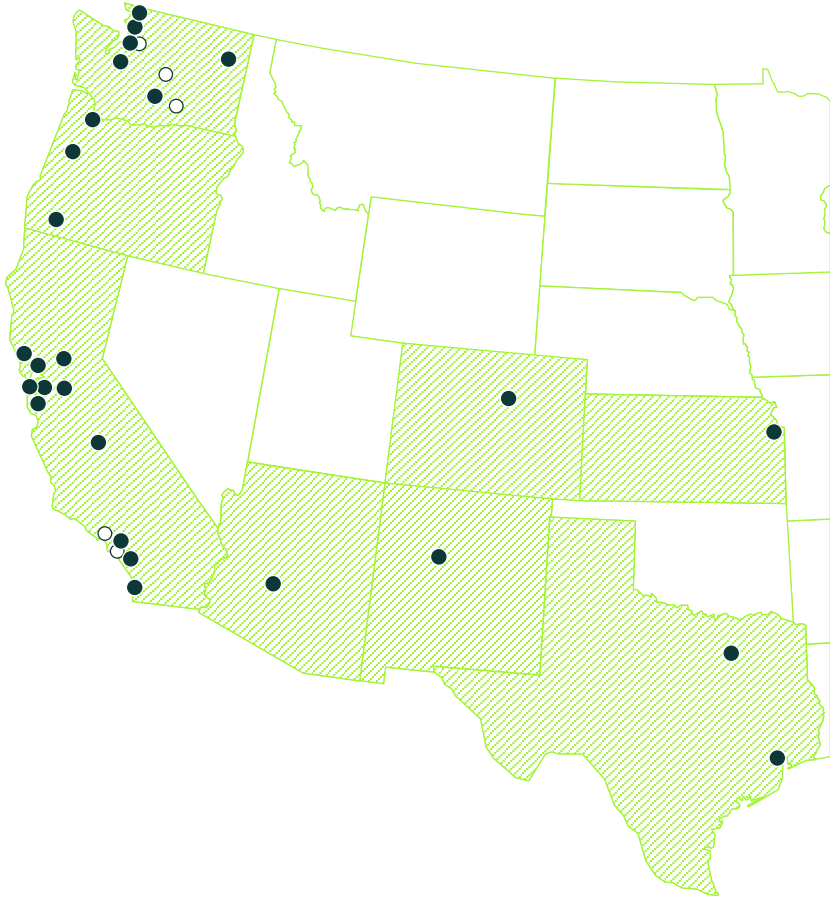
Agenda

- About Moss Adams
- About EWEB
- Why Focus on IT?
- Nature of Our Client Environments
- How Does IT Impact the Audit?
- What Are the IT Risks?
- Application Controls
- Key Reports
- Tools and Processes
- Questions?



About Moss Adams

Moss Adams is a fully integrated professional services firm dedicated to personally assisting clients with growing, managing, and protecting prosperity. With more than 2,900 staff across 29 locations in the market capitals of the West and beyond, we work with the world's most innovative, dynamic, and promising clients and markets. Through a full spectrum of accounting, consulting, and wealth management services, we bring the deep industry specialization and inspired thinking our mid-market clients seek.



- **105** years in business
- **2,900+** professionals
- **30+** industries served
- **29** locations west of the Mississippi
- **$577M** in revenue earned
- **100+** countries served *through Praxity, AISBL*

About EWEB

Type	Public
Customers	200,000
Services (Electric)	90,000
Services (Water)	65,000
Employees	487
IT Employees	55
E-Consumption	2.4B kWh/Year
E-Consumption	275 MWa
E-Consumption (Peak)	600 MWa
W-Consumption	7.5B Gallons
W-Consumption (Winter)	16 MGD
W-Consumption (Peak)	54 MGD
Service Territory	236 Sq. Miles
Power Lines	1,300 Miles
Water Pipes	800 Miles

Hayden Bridge Treatment Plant

Why Focus on IT?

- Constant changes
- Extensive use of technology
- Integration and knowledge
- Key reports
- Application controls
- Importance of understanding technology and how it is used
- Assumption that the system is always right

Understanding the Environment

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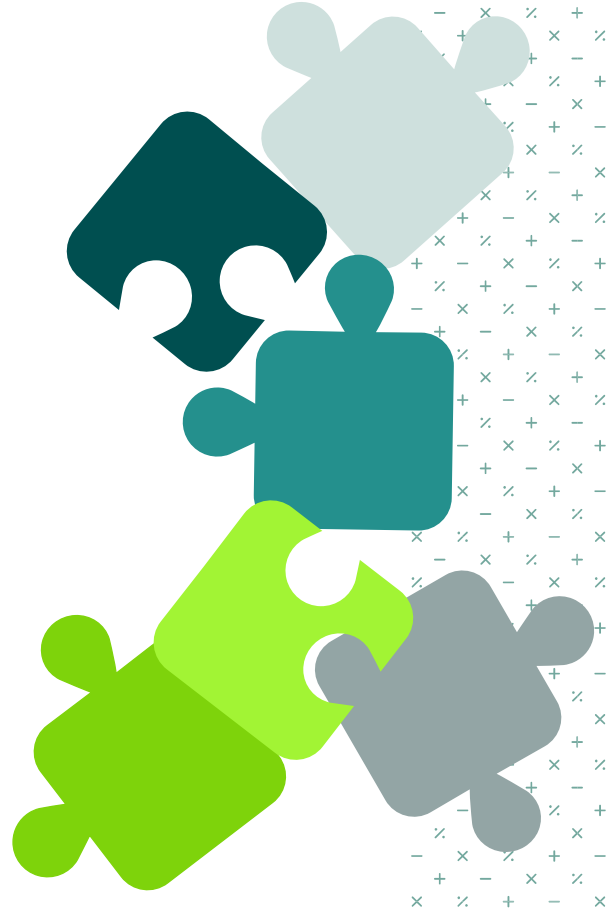
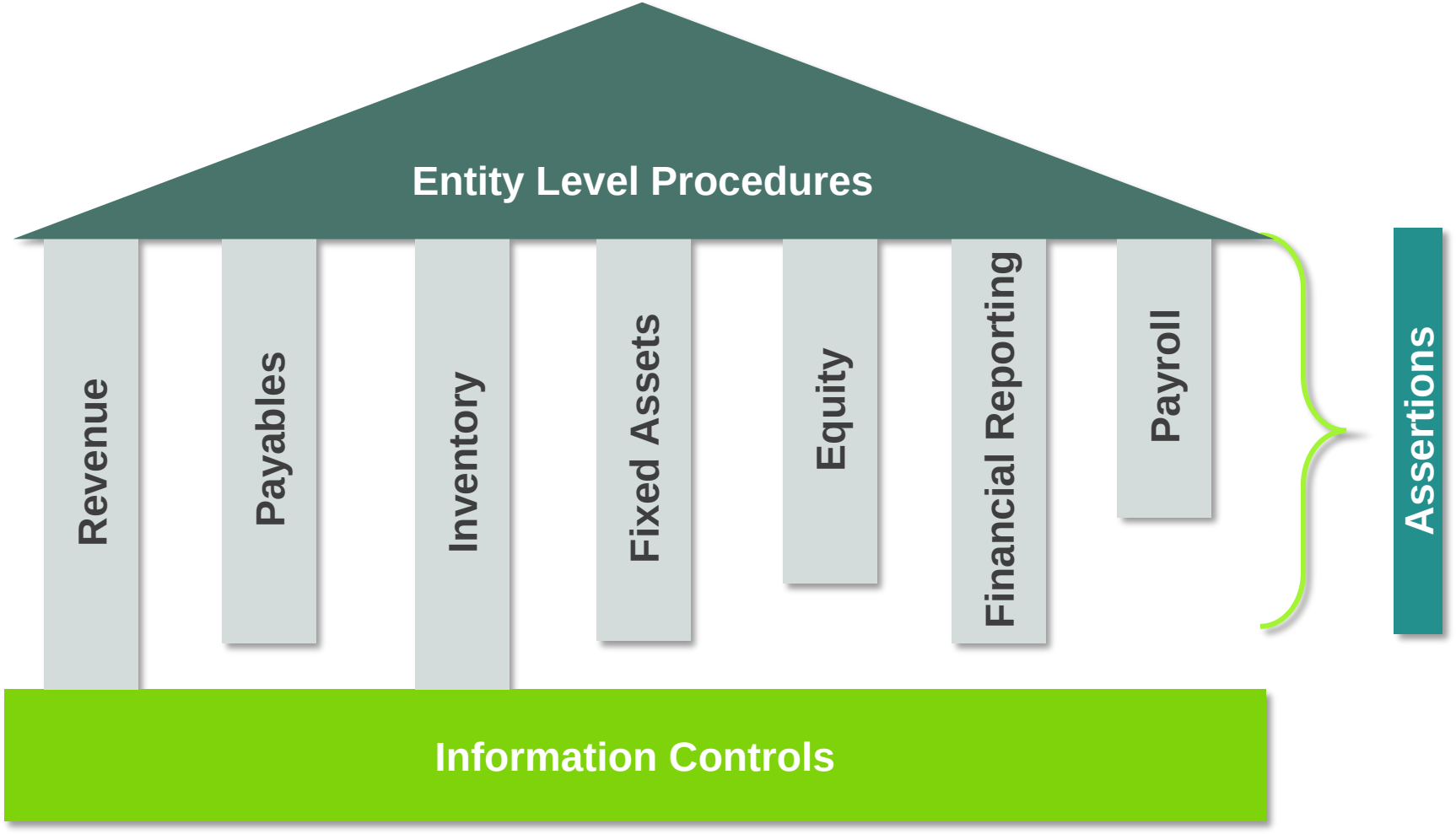
How Does IT Impact the Audit?

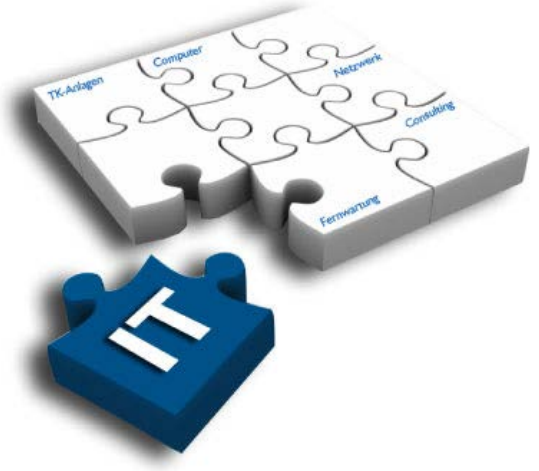


Why is IT Important?



Why is IT Important?

- Key Reports
- Reliance on the Integrity of Data/Information
- Dependent on Application Controls
- Integration and Knowledge
- Regulatory Requirements

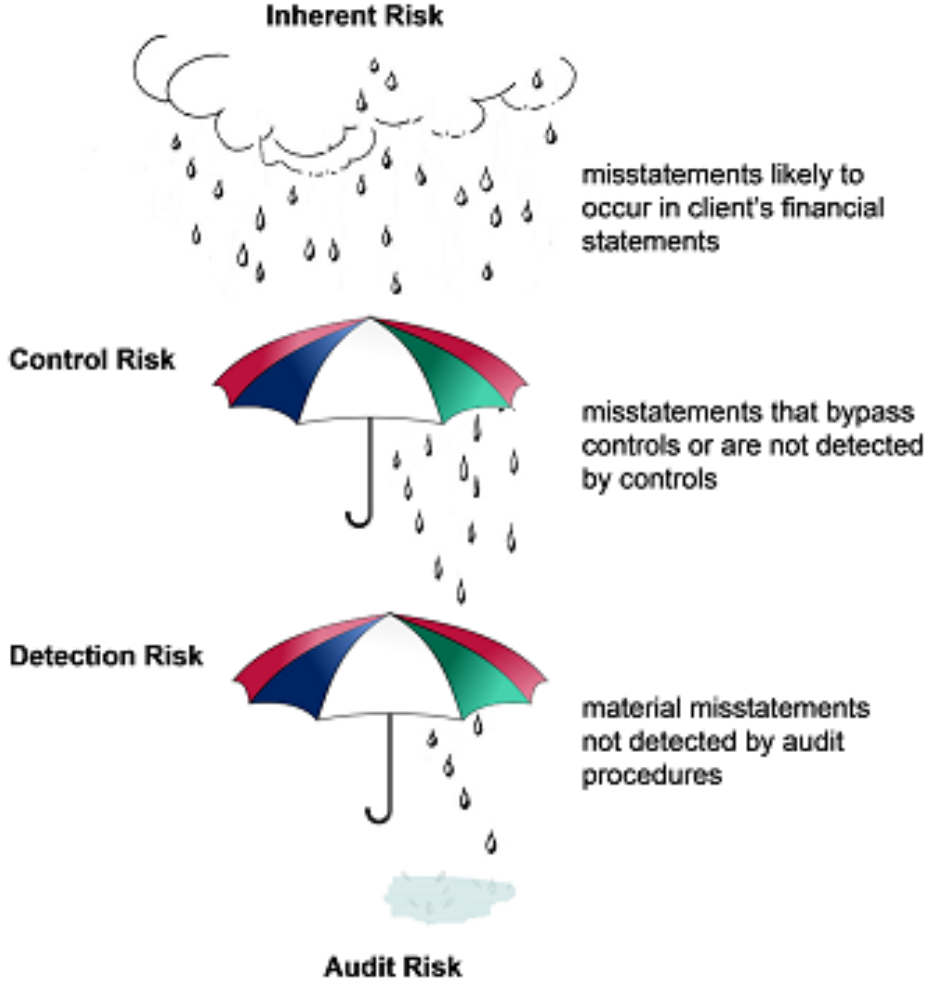


Why is IT Important?

What is Inherent Risk?
The risk of a material misstatement in the financial statements arising due to error or omission as a result of factors other than the failure of controls.

What is Control Risk?
The risk of a material misstatement in the financial statements arising due to absence or failure in the operation of relevant controls of the entity.

What is Detection Risk?
The risk that the auditors will fail to detect a material misstatement in the financial statements.

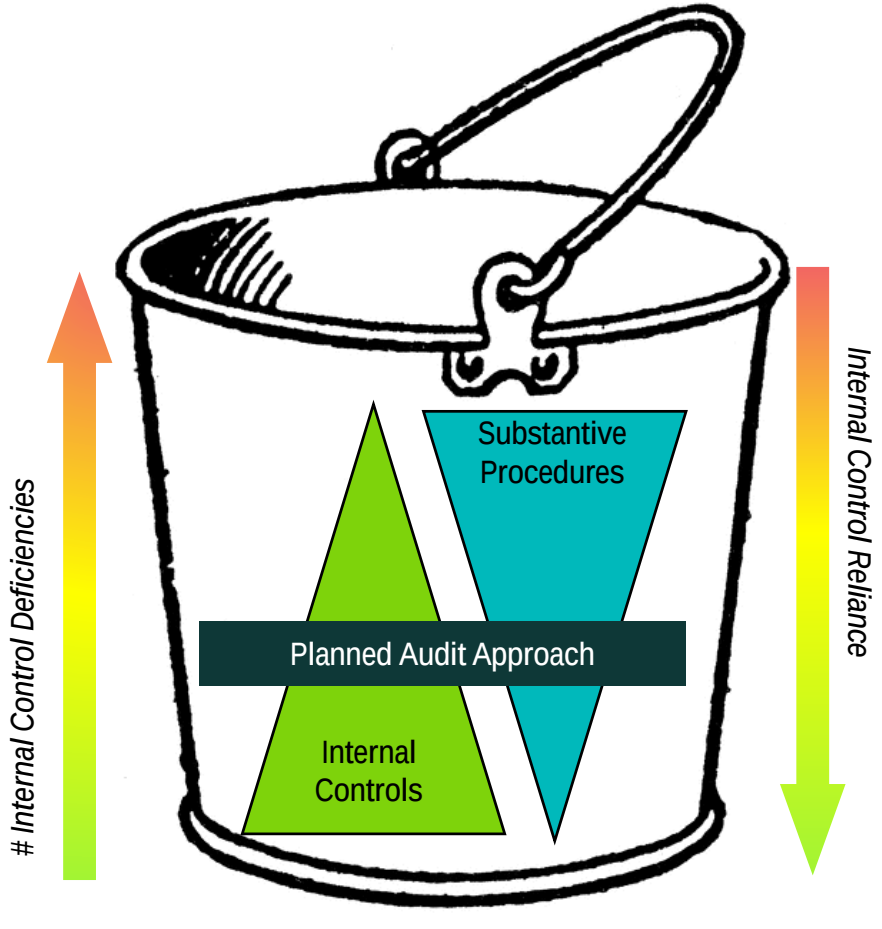


Why is IT Important?

Filling the Assurance Bucket

If adequate and effective internal controls are in place, more reliance can be placed on them and less substantive audit procedures are necessary to “fill the bucket,”

As deficiencies arise, we must assess their impact to the audit to determine whether an adjustment in the planned audit approach is necessary.



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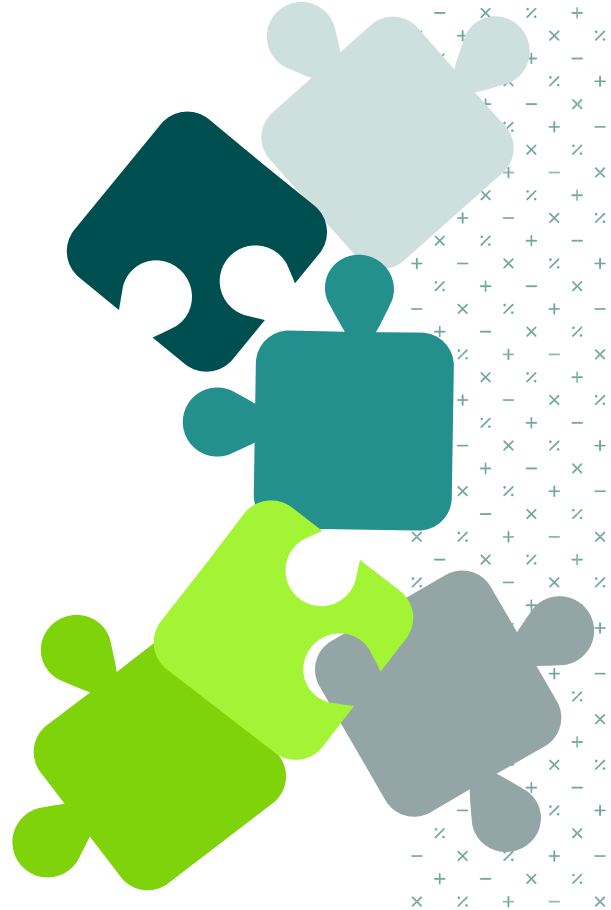
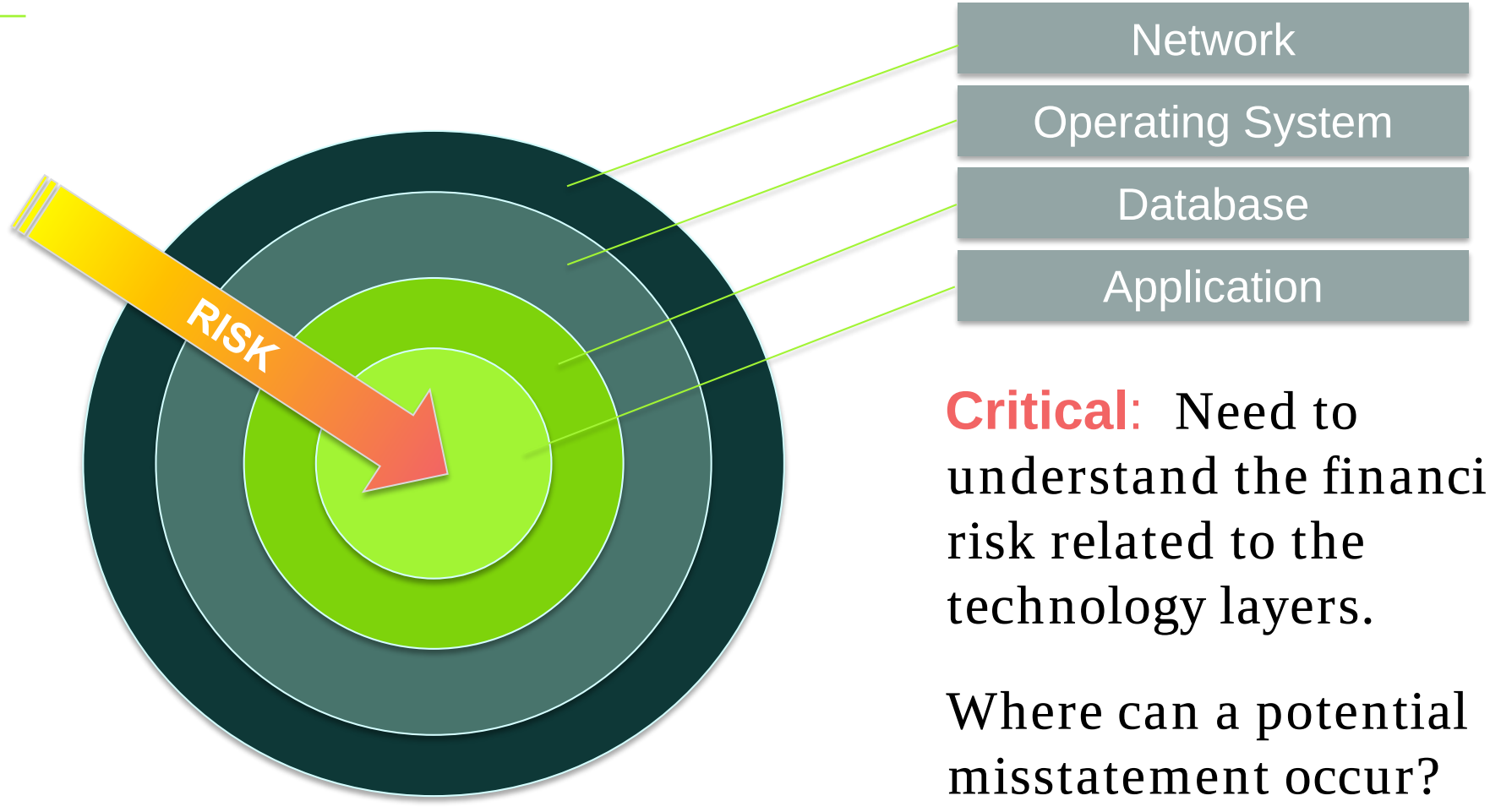
What Are the IT Risks?



Evaluating IT Risk



Critical: Need to understand the financial risk related to the technology layers.

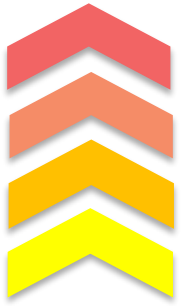
Where can a potential misstatement occur?

IT General Overview

What are Information Technology General Controls (ITGCs)?

- Controls over applications, databases, and infrastructure components that ensure:
  - That changes are made and authorized
  - That all levels of security are properly authorized and restricted
  - Systems are monitored for processing errors and that information can be recovered in the event of failures

- Four domains include:
  - Systems Development Life Cycle (SDLC)
  - Change Management
  - Security
  - Computer Operations



Degree of Importance to the Financial Audit

IT General Overview—System Development (SDLC)

	When do SDLC controls apply?	What are the most important considerations for the financial audit?

SDLC	• New systems implementations
	• Major upgrades to existing systems
	• Transition to a different system
		• User acceptance testing
		  o Functionality—transaction processing
		  o Reports—financial reports and control reports
		• Data conversion/migration
		• Go-live approval

SDLC Risks

What could go wrong?

- Fictitious master data (e.g., vendors, payroll, etc.)
- Incomplete chart of accounts
- Improper classification
- Inaccurate data and balance
- Fraud
- Unknown access or conflicts
- Broken transactions

Example – 2014 Audit

Lack of Service Level Agreements

During our discussions with management and our procedures over IT systems, we noted that EWEB has implemented key financial and operational IT systems without a clear understanding of service levels required by the internal IT department.

Example - Resolution

- Developed SLAs to address this comment. However, SLAs don't address the root cause
- Reestablished trust with business units
- Trained IS and BU staff to support the new application
- Replaced SLAs with Application Management Teams

WAM

WAM is a work and asset management system that enables EWEB to collect operational data and costs for all planning, acquisition, construction, operation, and maintenance activities.

Primary Contact(s): Josh Geske, Michelle Chadwell

IT General Overview—Change Management

CHANGE MANAGEMENT	When do change management controls apply?	What are the most important considerations for the financial audit?
	Anytime modifications are made to existing technology • Patches and minor upgrades • Transaction processing programs and configurations • Interfaces • Reports	• Segregation of developer and production access • User acceptance testing o Functionality—transaction processing, data capture, and configuration o Reports—financial reports and control reports • Approval to move to production • Reliable tracking/documentation of changes

Change Management Risks

What could go wrong?

- Inability to rely on reports or information
- Improper classification
- Inaccurate data and balance
- Fraud
- Broken transactions

Example – 2013 Audit Finding

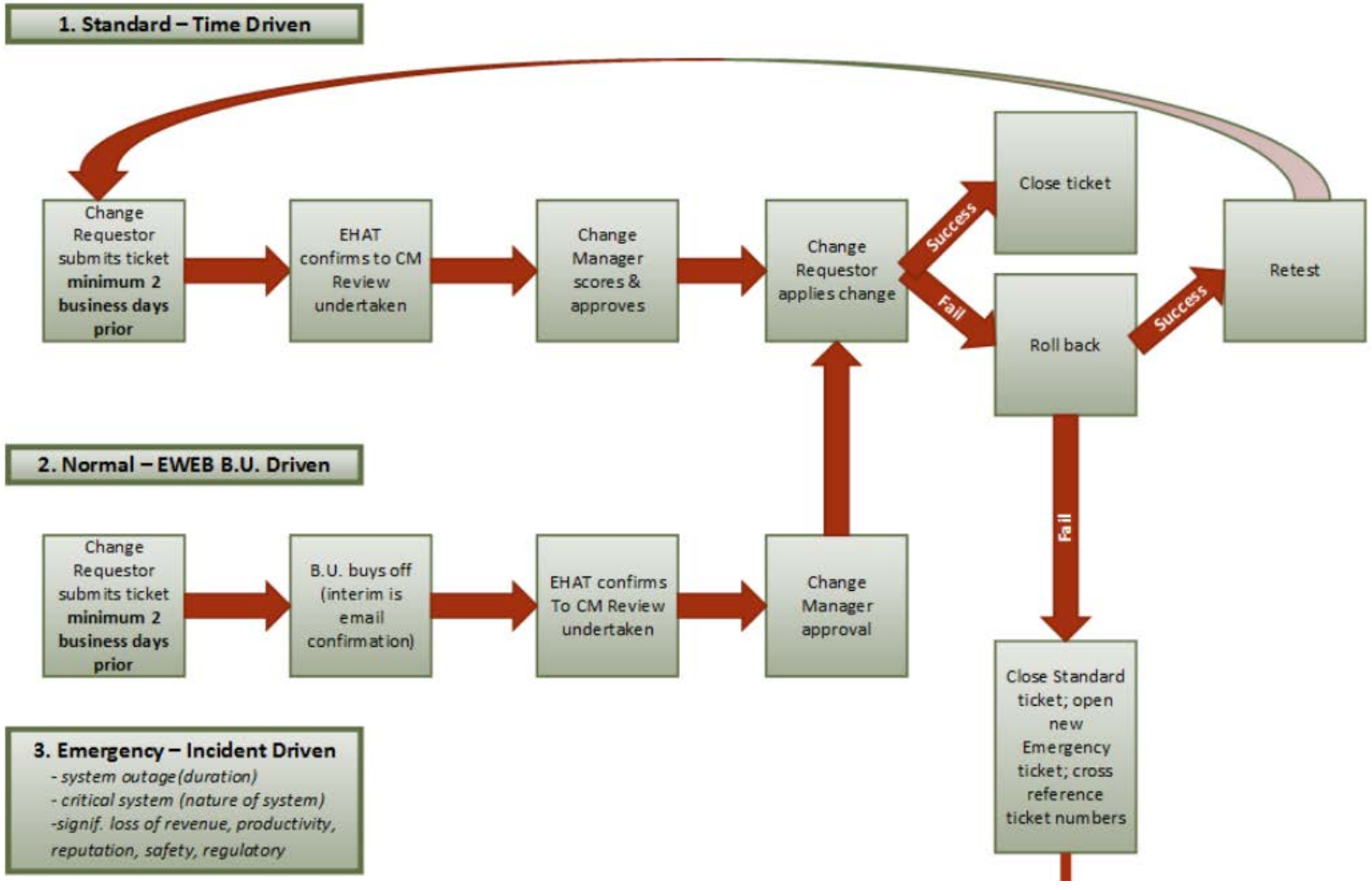
IT circumvention of controls

It was noted that there was an issue where internal controls were circumvented by IT personnel based on requests from users.


```
select X.ITEMCODE,X.[ITEM_DESCRIPTION], x.[Received], X.[Issues], X.[Project]
from
     (SELECT distinct T0.ItemCode as ITEMCODE, T0.ItemName AS [ITEM_DESCRIPTION],
ISNULL((SELECT SUM(T1.[Quantity]) from IGN1 T1 WHERE
T1.WhsCode = 'RecBay'AND  T1.[ItemCode] = T0.[ItemCode]),0) AS [Received] ,
ISNULL((select top(1) T1.[Project] from IGN1 T1
where
T1.WhsCode = 'RecBay' AND
T1.[ItemCode] = T0.[ItemCode]),0) AS [Project]
,isnull((SELECT SUM(cast(T1.[Quantity] as int))  FROM IGE1 T1 WHERE
T1.WhsCode = 'RecBay' AND T1.[ItemCode] = T0.[ItemCode]),0) AS [Issues]
from OITM T0   ) X
```

Example –Resolution

Implementation of System Change and Configuration Management Policy and Procedure



IT General Overview—Security

	When do security controls apply?	What are the most important considerations for the financial audit?
SECURITY	**ALWAYS** for any financially significant application • Not all users are created equal (read-only, write) • Super-users	• Restricted/segregated administrative access • Restricted super-user access • Segregation of duties for business users • Auditing/monitoring of super-user or sensitive access • Reliable tracking/documentation of user administration activities

Security Risks

What could go wrong?

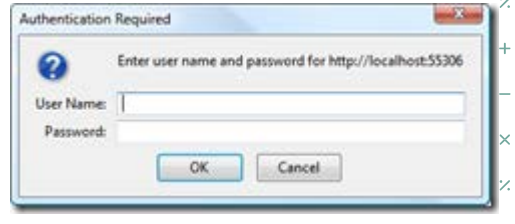
- Improper separation of responsibilities
- Manual and mitigating controls performed by the same person
- Inability to rely on application data
- Inaccurate data and balance
- Fraud
- Management override

Example – 2013, 2014, 2015, 2016, 2017 Audit

(Hopefully not 2018)

User Access Conflicts

During our review of IT user access, we noted that several users have access to more than one of the applications we reviewed (WAM, SmartStream, and CIS), thus potentially allowing access to do more than what should be allowed.



Example -Proposed Resolution

- IT leads process
- Lists user role by system
- Defines roles
- Requires a response and approval/disapproval from Reviewer
- Identifies issues or areas for improved controls

Reviewer: Barton, Matthew E

Employee Name	Application	Role
Atkin, Lisa S		
	CIS (Application)	
		BAN_BATCH_PROCESSING
		BAN_RETAIL_SVCS
		BAN_UTILITY_USER
	CIS (Database)	
		UGS_MAINT
		USR_EWEB_DEFAULT
	Ultipro	
		Compensation Reviewer/Approver
		Employee
		Manager
	WAM	
		BASIC
		REQUISITION
Bach, Brea N		

CIS Role Descriptions	
BAN_ADJUSTMENT_POSTING	Ability to do billing adjustments.
BAN_SEWER_BILLING	Adjustment processing, HBC processing, note updating.
BAN_UTILITY_USER	Read Only ability (all users must have this access at a minimum).
BAN_INVENTORY_ADMINSTRATION	Inventory maintenance, service order processing, notes screen, change meter configs and add meters (Inventory=Meters in CIS).
BAN_RETAIL_SVCS	Loan processing, note updating, service order processing, ability to enter rebates.
BAN_METER_READING	Service order generation and close, meter reading route validation and sequencing, meter reading exception processing, create notes.
BAN_BILLING_CNTRL	Billing exception processing, quick bill processing, adjustment reports and meter reading exceptions.
BAN_CUSTOMER_SVC_REP	Allows orders to be created and closed, customer info updates, notes entered, addresses updated, assess and adjusts deposits, bill apc's(account processing charges), field charges, tampers, etc. Set up and cancel payment arrangements, set up and cancel budget billing.
BAN_CASH_ACCTNG	Cash screens for cash drawer set up, payment posting, payment reversal, batch payment processing, draft set up, refund processing.
BAN_BAD_DEBT	Bad debt processing
BAN_BATCH_PROCESSING	Allows users to enter and execute jobs
BAN_DEPOSIT_TEAM	Deposit billing, deposit adjusting, deposit application and deposit transferring.
BAN_RATES_ADMINISTRATION	Maintain, add and change rate information and GL class codes.
BAN_REPORT_SUBMITTER	Process CIS reports
BAN_EWQCCS_C	EWQ maintenance
BAN_SYSTEM_ADMINISTRATION	Run processing jobs, maintain validation tables, run reports and maintain rules.
BAN_REBATE_PROCESS	Process rebates

IT General Overview—Computer Operations

COMPUTER OPERATIONS

When do computer operation controls apply?	What are the most important considerations for the financial audit?
ALWAYS for any financially significant application • Varying degrees of risk depending on relative impact to financial data	• Batch processing of transaction data within an application • Interfaces between applications • System issues leading to downtime • Lost data

Operations Risks

What could go wrong?

- Improper interfaces
- Missing or incomplete data
- Inability to restore information
- Override or lose data/information

Example – 2014 Example

Support for Oracle application and database environments

We noted that EWEB significantly expanded its use of Oracle as a result of the recent WAM system implementation. However, resources on staff to adequately support the application and database environments are limited. EWEB employs one FTE who has the skills and knowledge to manage and support the extensive Oracle environment. We recommend that EWEB consider hiring additional Oracle expertise or contracting with a third-party who can provide resources on an as-needed basis.

Example - Resolution

- Heavy investment in training
- Generalize job descriptions
- New department goals of “Three Deep Coverage for All Critical Systems”

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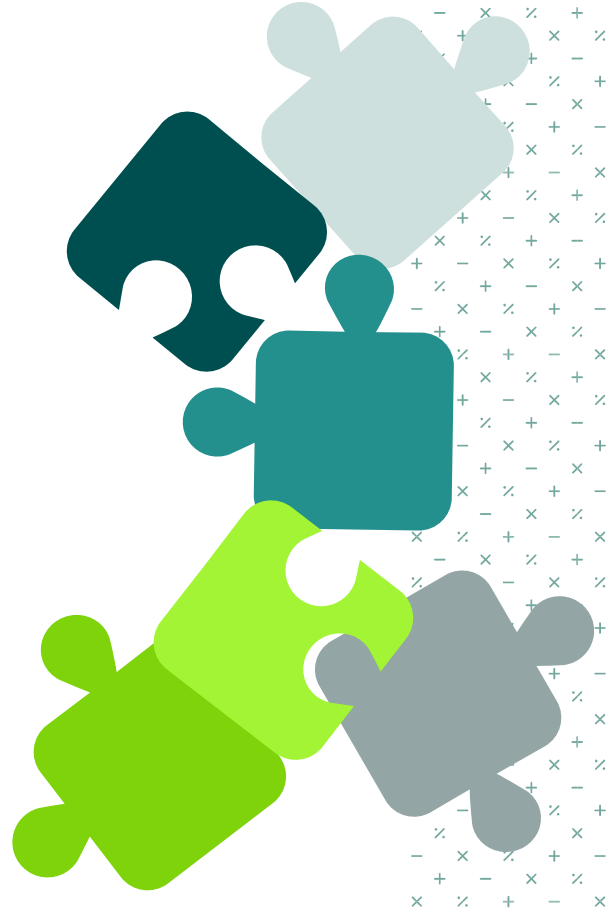
Application Controls



Types of Controls

YES	**Inherent—**delivered with the application; cannot be modified
	Configuration—customizable based on business needs and requirements; defined by management
	Calculation—mathematically determine complex or large volume transactions based upon a predefined formula; may also be a configuration
	Validation Checks—ensure data accuracy upon input
	Workflow—procedures or process created to ensure the proper routing of a transaction; requires configuration of routing rules
YES	**Security—**determines what a user can do in the system; restricted access, roles and responsibilities, segregation of duties

Application Control Concerns

Key Points on Testing Application Controls

- Coordinate walkthroughs
  - Difficult to understand and test without an understanding from the walkthroughs
  - Usually requires knowledge from both the business and IT
  - Tier 1 Applications (e.g. SAP, Oracle, PeopleSoft)

- Coordinate thoughtfully to understand client activities and data flows
  - Understand how transactions flow through the system
  - Which is the system of record

Application Control Testing

Key Points on Testing Application Controls

- Link to in-scope business processes
- Confirm scope of testing
- Timing of testing is critical
  - Complete prior to year-end or may not be able to use for audit
  - Understand configuration and screenshots
- Conduct positive and negative testing, where applicable and necessary

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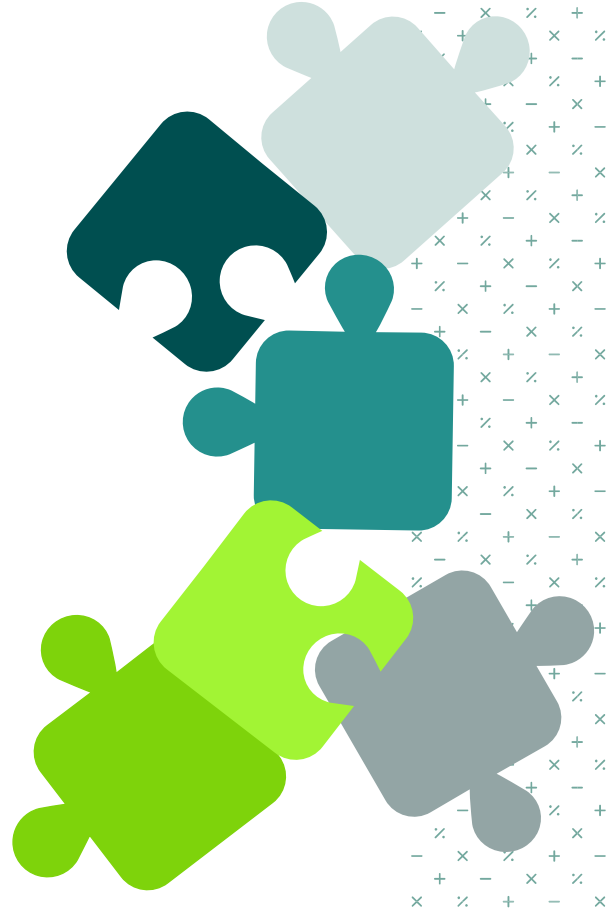
Key Reports



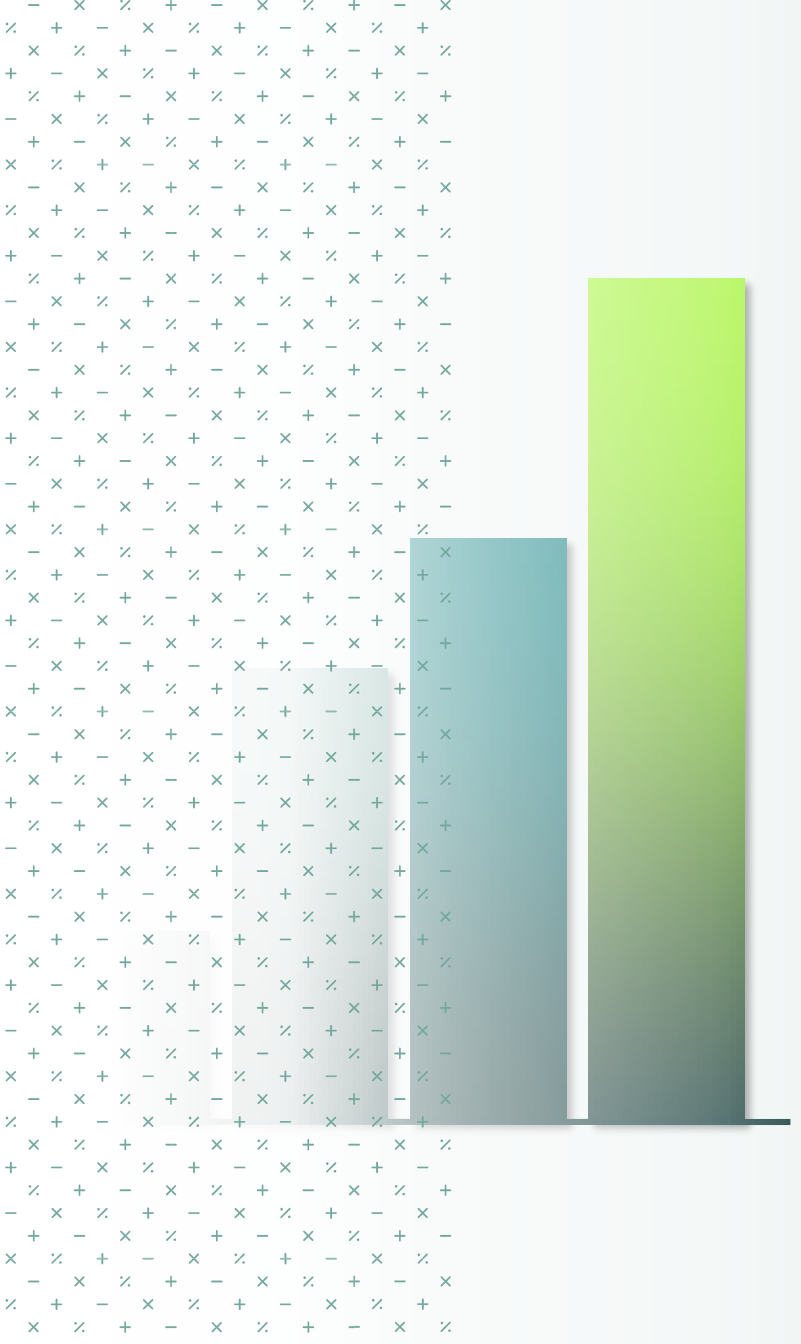
What Are Key Reports?

Financial Reports

- Income Statement
- Balance Sheet
- Revenue by Country

Control Reports

- AR Aging
- Asset Register
- JE Listing



Key Reports–Type of Report

High < Testing Difficulty > Low

Standard/Canned	Delivered with the application; not modifiable without vendor support ✓ Subject to formal ITGCs
Custom	Developed by management; customizable format and content ✓ May be in the application or a reporting tool ✓ Likely subject to formal ITGCs
Query/Ad-hoc	Developed by management on an as-needed basis; customizable format and content ✓ May be in the application or a query/reporting tool ✓ Not usually subject to formal ITGCs

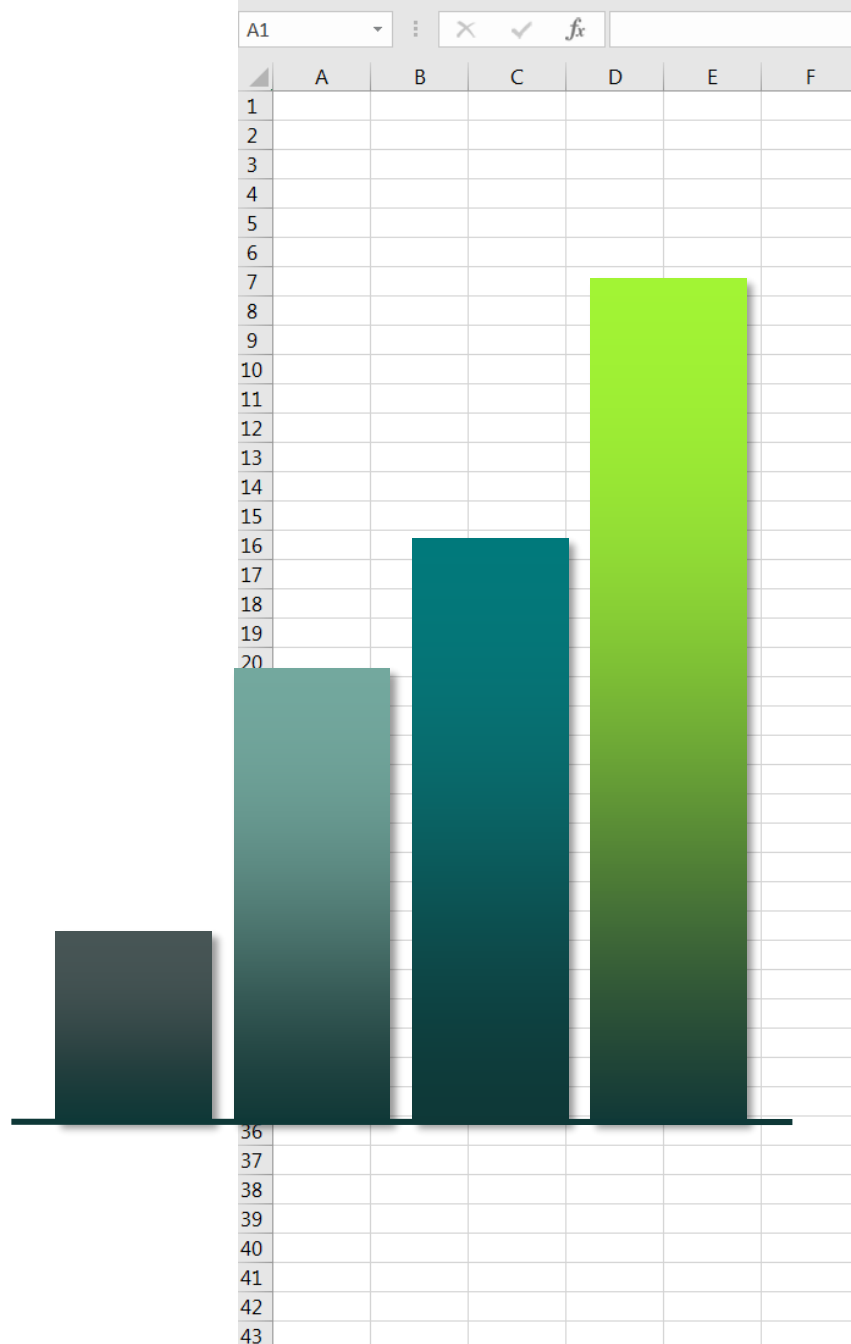
Key Reports–Spreadsheets

A Spreadsheet is NOT a Report

Tools used to create, alter, and manipulate information outside the core applications cannot be trusted. Other tools include:

- Access database
- Data marts
- Report Writers

Difficult to rely on IT general controls for spreadsheet testing or other end-user tools.



Key Reports—Testing

- Important to understand the nature of the report, which influences the degree of difficulty and approach for testing

- Completeness and accuracy considerations
  - Information prepared by the entity (IPE)
  - Are IT general controls effective?
  - What independent/reliable sources can the report be tied to?

- Information needed to test reports
  - Report name (friendly and technical)
  - Source system or application
  - Key client contact name
  - Supported business process, control, or audit procedure

Questions?

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Thank you