Using Data Analytics to Identify Internal Control Risk

Florida Audit Forum

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WEALTH ADVISORY | OUTSOURCING | AUDIT, TAX, AND CONSULTING

Investment advisory services are offered through CliftonLarsonAllen Wealth Advisors, LLC, an SEC-registered investment advisor

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About CLA

HISTORY

60+ years in business

FISCALLY STRONG

$1.1 billion in revenue

LOCATION

More than **120** locations nationwide

NATIONAL

Among the nations' leading professional services firm
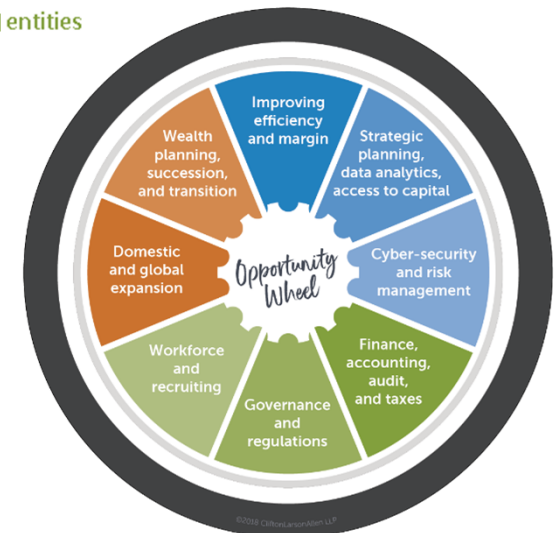
6,100+ employees

INDUSTRY DRIVEN

We serve **2,700+** Governmental entities

RESOURCES

Including: **600+** state and local government professionals

Culture of Innovation
- Data analytics
- Proprietary modeling software
- New technologies

Efficiency

Opportunity Wheel

- Improving efficiency and margin
- Strategic planning, data analytics, access to capital
- Cyber-security and risk management
- Finance, accounting, audit, and taxes
- Governance and regulations
- Workforce and recruiting
- Domestic and global expansion
- Wealth planning, succession, and transition

Poll

Who is here today?
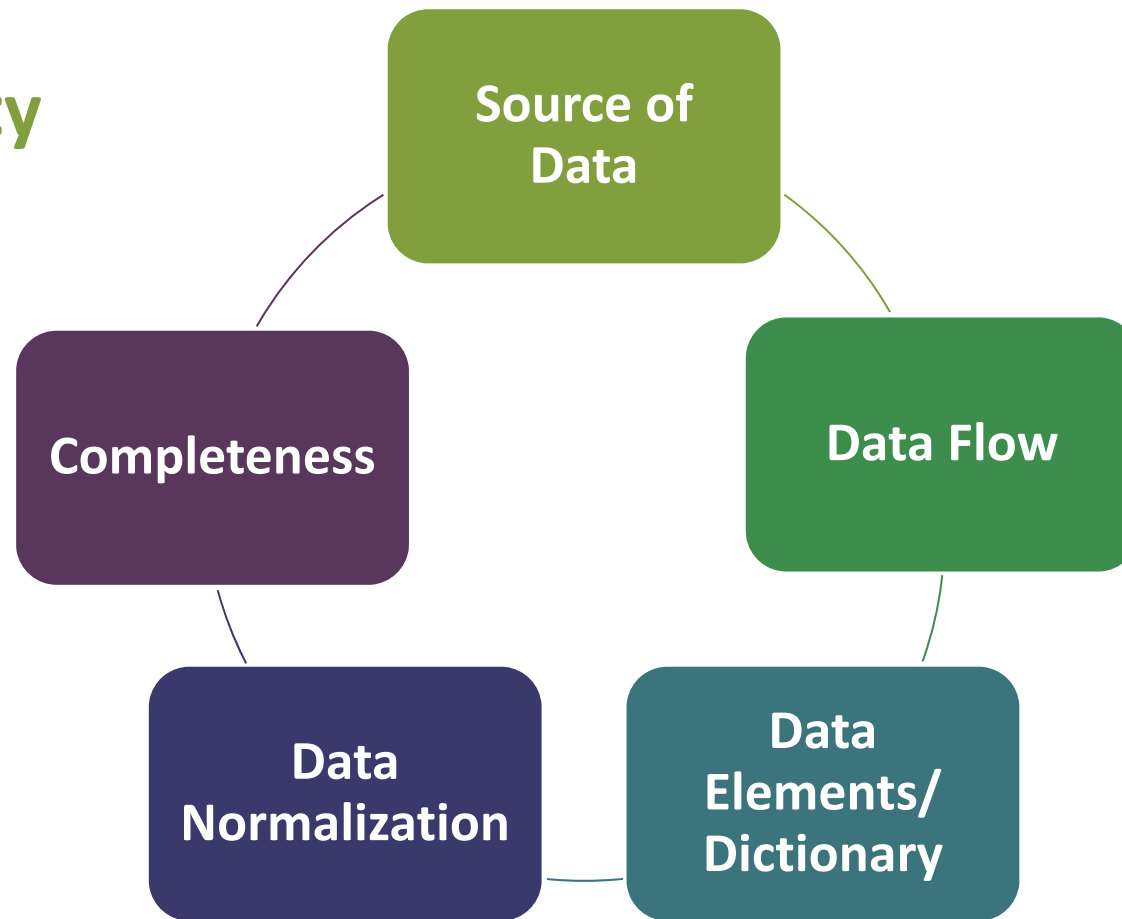
What is your use of data analytics?

Agenda

- Basic data analysis best practices
- Cover some real world examples of fraud discovery and process improvement using data analytics
- Discuss the best analyses for identifying internal control risk
- Discuss the role of computerized controls in risk assessment
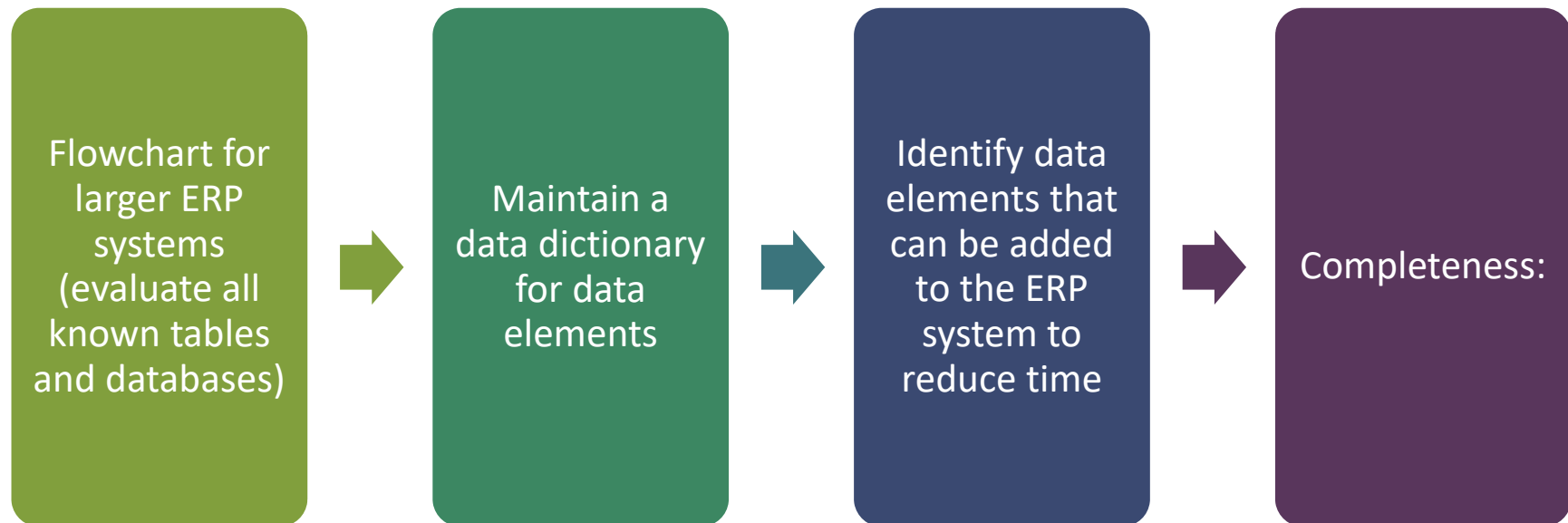- Questions and closing comments

Basic Data Analysis Methodology

- Identify objectives, understand client system, obtain desired skill set
- Discuss risks, understand control environment, get input from interested users, rank risks

- Communicate with department
- Data extraction
- Send request list to department (if necessary)
- Technical Analysis

Plan

Access Data

Report

Analyze Data

- Achieve desired objective
- Document procedures and results
- Identify best practices and other useful information

- Corroborate results
- Identify anomalies
- Reassess risk

Data Integrity

Source of Data

Data Flow

Data Elements/ Dictionary

Data Normalization

Completeness

Data Integrity – Best Practices

Flowchart for larger ERP systems (evaluate all known tables and databases) → Maintain a data dictionary for data elements → Identify data elements that can be added to the ERP system to reduce time → Completeness:

"Check twice, analyze once"

Computerized IT Controls

- Consider the IT control environment
  - Who has access to enter data?
  - Who has access to modify data?
  - Inquire about the way cash is received and disbursed
  - Inquire about 3rd party applications (Square, PayPal, etc.)
  - Determine who has administrator rights
  - Determine what pre-defined use roles are setup
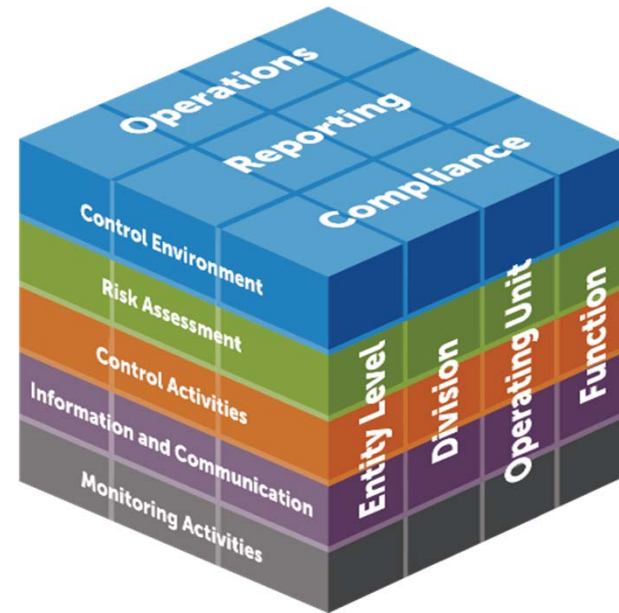 - Are roles appropriately applied?

Keys to Fraud Prevention

COSO Considerations

Segregation of Duties

COSO Internal Control: Integrated Framework

Case Study #1

"Bad Debt Debbie"

Background

- Quasi-governmental entity

- Provided affordable housing

- De-centralized controls

- Lack of oversight

- Poor employee morale

- Debbie is a "jack of all trades"

Background

TIP: Debbie is always pushing me to pay in cash

All bad debt must be approved by the board before it is written off

Per review of the minutes, bad was regularly brought to the board for approval

Data First

- Obtained the general ledger data for tenant accounts receivable and tenant revenue and bad debt
  - ***Determined Completeness***
- Summarized by transaction type
- Summarized by property (i.e. property manager)
- Comparisons to other property managers

Analyses Performed

- Understanding of Data Types

Type Descriptions	
Charges for move out, rent, writeoffs	C
Journal entries	J
Checks	K
Purchases/contracts	P
Receipts	R

Results of Procedures

Fraud was detected

An employee was fired, several others resigned

No charges were pressed, but the organization received bad publicity and public scrutiny

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Lessons Learned

Internal controls over bad debt were working properly

Data analysis can identify anomalies that lead to additional internal control considerations

System access controls are important

Understanding ERP and Accounting Systems

- **How do they work?**
- **What impact does this have on internal controls and fraud prevention?**
- **How do I audit in the "system"?**

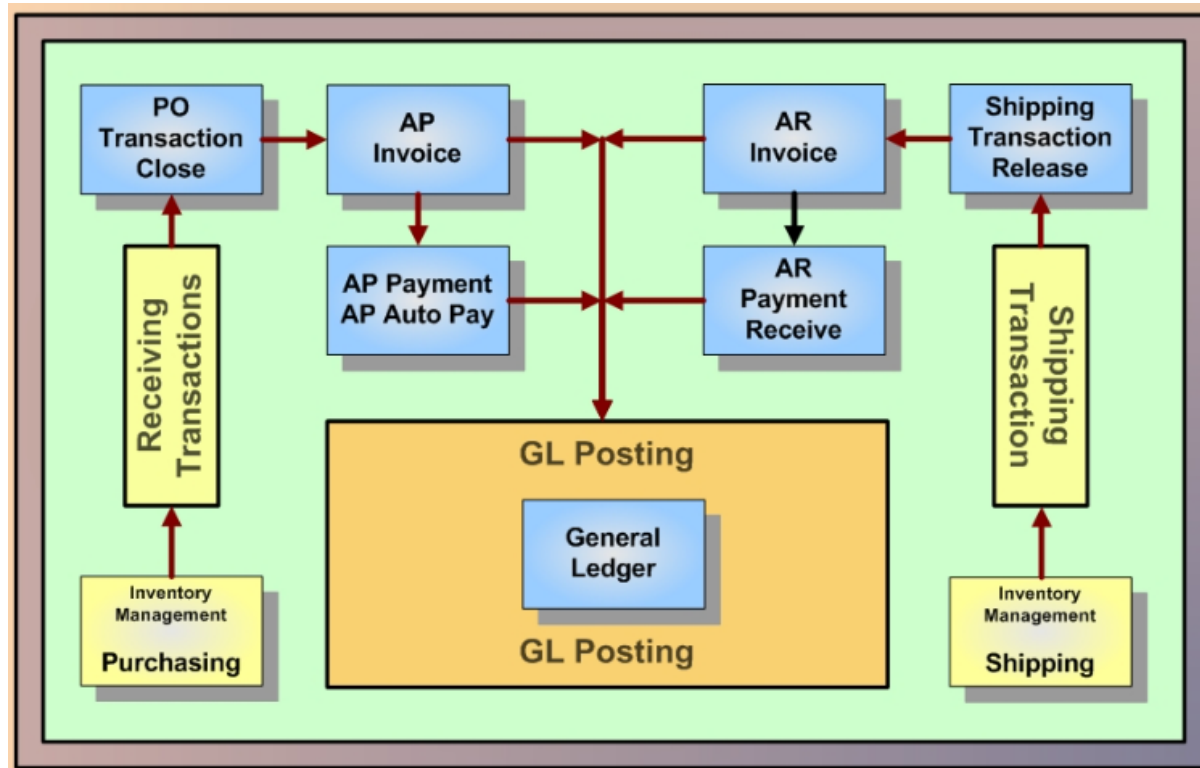WEALTH ADVISORY | OUTSOURCING | AUDIT, TAX, AND CONSULTING
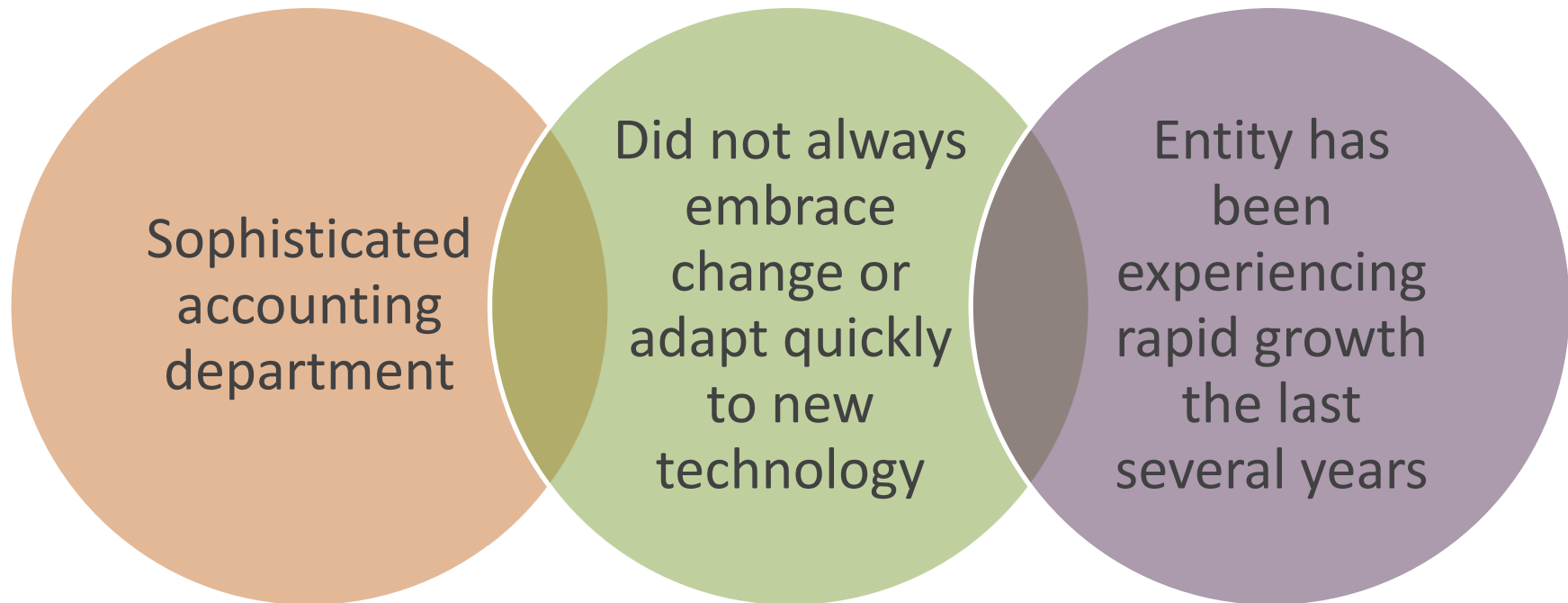
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Basic Accounting System Data Flow

Accounting System/ERP Considerations

Know your tables

Understand IC environment

Know how databases interface

Inquire about 3rd party applications/interfaces

Know your users

Don't rely only on review of IT access (consult the data)

Case Study #1

"Brilliant Bob"

Background

- Manufacturing and distribution entity
- Multiple locations, but centralized accounting
- Overall strong internal control environment
- Sophisticated accounting and finance staff
- Bob is "smarter than the accounting system"

Background

Sophisticated accounting department

Did not always embrace change or adapt quickly to new technology

Entity has been experiencing rapid growth the last several years

Data First

- Obtained the general ledger data for 3 years
    - ***Determined Completeness***
- Summarized by transaction type
- Summarized by user

Results of Procedures

Identified need for more training on the software

Complete evaluation of the accounting system uncovered numerous efficiency opportunities

Organization experienced a radical change and has adopted cutting edge cost saving measures

Lessons Learned

When used properly, ERP systems are powerful tools

Data analysis identified significant inefficiencies while also standardizing operations

Tools Used and Most Used Analyses

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Tools Used

- IDEA
- Excel

Other Tools Used

- TeamMate Analytics
- ACL
- Power BI

Data to Better Understand IC

- Summarizations
- 5 Groups of analytics
- Fields:
  – User data
  – Transaction type
  – Absolute value

Questions or comments?

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