



We'll get you there.

Artificial Intelligence for Auditing

December 4, 2023

CPAs | CONSULTANTS | WEALTH ADVISORS

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Learning Objectives



EXPLORE TRENDS IN
INDUSTRY



ANALYZE
INNOVATION'S IMPACT



PREDICT SKILLS
NEEDED IN INDUSTRY

The Why

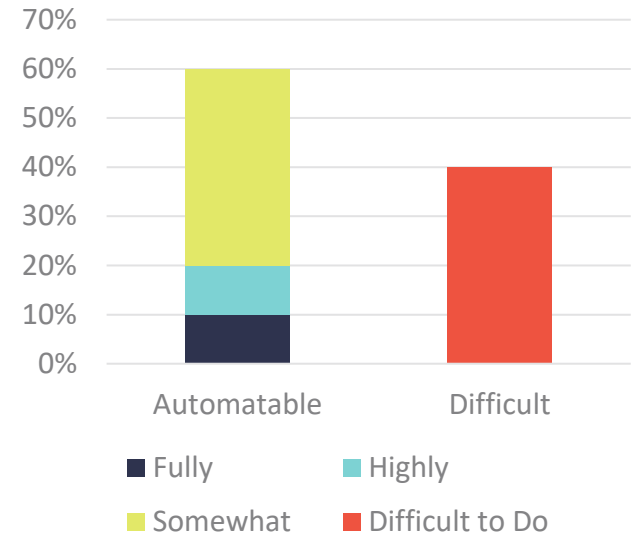
0%

Accounting Students who go to School for
Data Entry



60%

Audit Tasks and Processes that are at Least
Somewhat **Automatable**.



Source: McKinsey & Company
Memo to the CFO: Get in front of digital finance—or get left back.

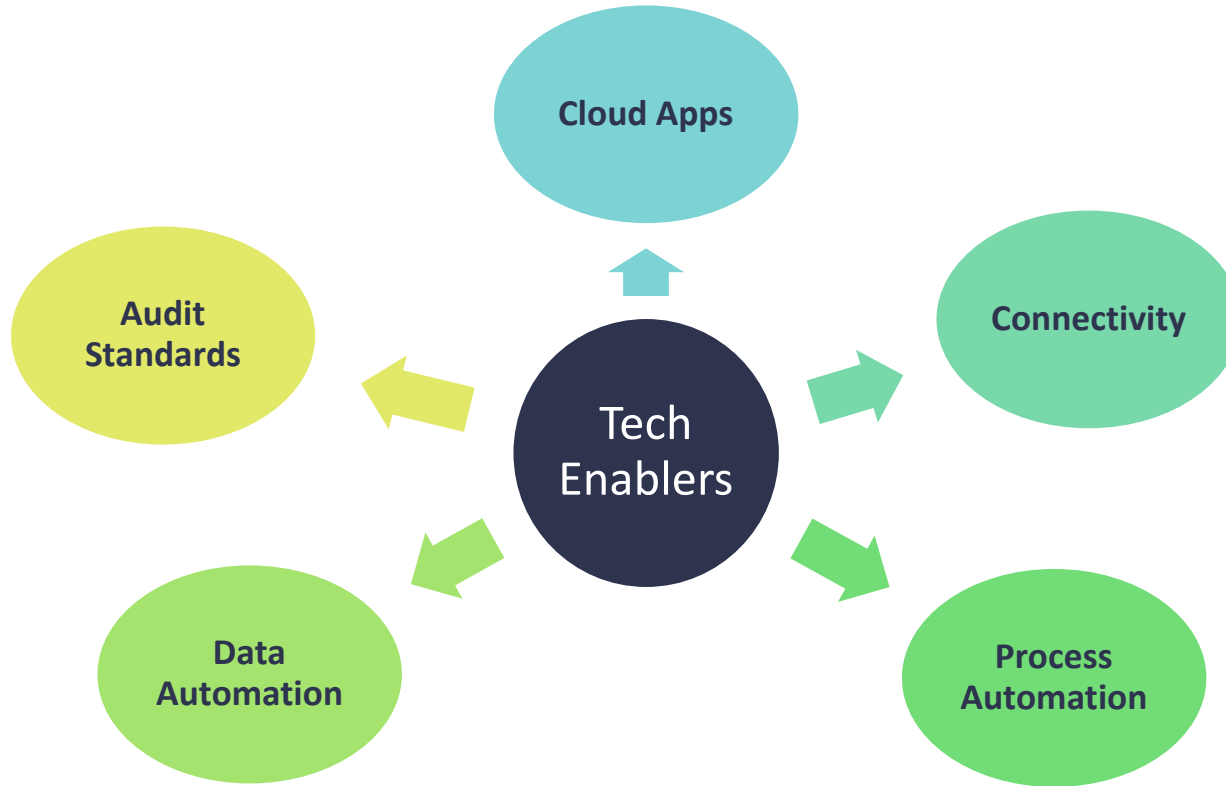
Let's start with people side...

We asked 100 CPAs what was their
least favorite task to do on an audit.



Trial Balance Groupings	20
Sorting through Invoices	20
Summarizing (Debt, Leases, Minutes)	20
Confusion / "What Should I Do?"	20
Transferring from One Form to Next	20

Now to the technology side...



Cloud Apps and Connectivity

Today's Environment for Most Firms

- Core Technology Designed 25 Years Ago
- Top Review Comment: “XYZ was not properly carried to another w/p”
- Top Reason Cited for Minimal Analytics: “Data too hard to ingest”

Vendor Trends

- Cloud
- Connections across Systems
- Connections across Audit Methodology



Process and Data Automation

Client
Setup &
Workflow

Organizing
Client Data

Reading &
Summarizing
Documents

Data
Analytics

Procedures

Reporting

Cloud Apps / Connectivity
Open Information for Automation



Improvements working with Client Data

System Reports

- Data Ingestion Tools
- ERP Connections
- Banking and Other External Data

Trial Balance Groupings

- AI-Assisted Groupings

Reading & Summarizing Documents

- Automated Matching Tools
- Form Recognition
- Document Summarization



Technology

Example: Journal Entry Testing



Step 1: Ask for Help

	A	B	C	D	E	F	G	H	I
	Account ID	Account Description	Date	Reference	Jrnl	Trans Description	Debit Amt	Credit Amt	Balance
1	11111-4290	Petty Cash	12/01/17			Beginning Balance			300.00
2			12/31/17			Ending Balance			300.00
3									
4	11211-4290	Checking Account	12/01/17			Beginning Balance			6,121.16
5	11211-4290	Checking Account	12/05/17	23148	CRJ	John's Computer Supply	6,500.00		
6	11211-4290	Checking Account	12/07/17	4116	CDJ	Lumber Depot		686.00	
7	11211-4290	Checking Account	12/09/17	4117	CDJ	Smith Management, Inc		2,850.00	
8	11211-4290	Checking Account	12/09/17	4118	CDJ	Indiana Electric Inc		363.90	
9	11211-4290	Checking Account	12/09/17	4120	CDJ	Northern Telephone		150.80	
10	11211-4290	Checking Account	12/10/17	5203	CRJ	Monrovia Superconductor Outlet	7,546.06		
11	11211-4290	Checking Account	12/15/17	4119	CDJ	Transistor Hut		400.00	
12	11211-4290	Checking Account				Current Period Change	14,046.06	4,450.70	9,595.36
13			12/31/17			Ending Balance			15,716.52
14	11311-4290	Payroll Checking	12/01/17			Beginning Balance			1,081.60
15	11311-4290	Payroll Checking	12/09/17	PAYROLLT31	GENJ	Funds transfer	4,600.00		
16	11311-4290	Payroll Checking	12/09/17	1239	PRJ	Shirley Stewart		656.68	
17	11311-4290	Payroll Checking	12/09/17	1240	PRJ	Bill Jones		787.54	
18	11311-4290	Payroll Checking	12/09/17	1241	PRJ	George Smith		650.87	
19	11311-4290	Payroll Checking	12/09/17	1242	PRJ	Judy Williams		966.55	
20	11311-4290	Payroll Checking	12/09/17	1243	PRJ	Cindy Mulligan		627.25	



Example GL File.xlsx
Spreadsheet

I'm an auditor and got this general ledger detail from my client. Can you summarize by Reference (column D) and help me identify any unusual journal entries that might be a fraud risk?

Sure, I can help you analyze the general ledger data. To begin, I will load the data from the file and take a look at the first few rows to understand its structure.

Finished working

Show work

Step 2: Interact & Refine

After summarizing the data by reference, we observe that the total debit and credit amounts are equal for each reference, and the differences are very close to zero (likely due to rounding errors). This suggests that there are no obvious discrepancies in terms of the debit and credit balances for each reference number.

However, this analysis alone is not sufficient to identify potential fraud risks. To further investigate, we can look for patterns or characteristics that are often associated with fraudulent activity, such as:

- Transactions occurring at unusual times (e.g., weekends or holidays)
- Transactions involving round amounts (e.g., \$1,000, \$10,000)
- Unusually large transactions compared to the normal activity of the account
- Transactions involving related parties or entities with similar names
- Frequent amendments or reversals of transactions

Do you have any specific criteria or thresholds in mind for these types of analysis?

Those types of analysis would be perfect. Please do that

Great! Let's start by analyzing the general ledger data to identify transactions with potential fraud risk based on the criteria you mentioned:

Step 3: Review Results

To summarize, we have identified transactions with potential fraud risks based on the following criteria:

1. **Transactions occurring on weekends or holidays:** 151 transactions identified.
2. **Transactions involving round amounts:** 23 transactions identified.
3. **Unusually large transactions:** 18 transactions identified.
4. **Transactions involving related parties or entities with similar names:** 108 transactions identified.
5. **Frequent amendments or reversals of transactions:** None identified.

You may want to review these transactions in more detail to determine if there are any suspicious patterns or inconsistencies. Let me know if you need any further assistance.





Caution: Many AI tools log and retain information that is not appropriate for client information

Audit: Risk Scoring Models

Common Approach



Using ADAs to Simultaneously Perform Risk Assessment and Substantive Audit Procedures



Audit: Risk Scoring Models

Determine factors driving risk

Routine	Description	Characteristic	Transaction Scoring Model	Risk Score	Relevant Fact Pattern
1	Identify customers with infrequent revenue activity (less than X transactions)	Volume	Less than 6 transactions	2	Some customers only purchase in bulk a few times a year, but most customers consistently purchase quantities one to two times a month.
			6-12 transactions	1	Some customers only purchase in bulk a few times a year, whereas others purchase smaller quantities one to two times a month.
			More than 12 transactions	0	
2	Identify customers with a significant fluctuation in volume of products purchased (item level) on a period-over-period basis	Volume	Greater than 70% variance	2	Customers tend to purchase consistent quantities throughout the year, with the exception of purchases just prior to major retail holidays, such as Memorial Day, Black Friday, and Christmas.
			30% to 70% variance	1	Some customers only purchase in bulk a few times a year, but most customers consistently purchase quantities one to two times a month.
			Less than 30% variance	0	
3	Identify activity for new customers	Volume	Customer for 6 months or less	1	The customer base does not fluctuate significantly from period to period.
			Customer for greater than 6 months	0	
4	Identify all transactions recorded within X days of quarter-end	Timing	Within 3 days of quarter end	1	Revenue is recognized when control transfers at FOB shipping point.
			Greater than 3 days of quarter end	0	
5	Identify revenue transactions with an invoice date on	Timing	Transaction on a	2	Invoicing occurs the day the product ships from the company's warehouse.

Risk assess sub-populations

Assessed Risk	Total Risk Score	Group
High risk	8-12	A
Moderate risk	4-7	B
Low risk	0-3	C

Audit response unique to each sub-population

- Alter nature, timing, and extent based for each sub-population





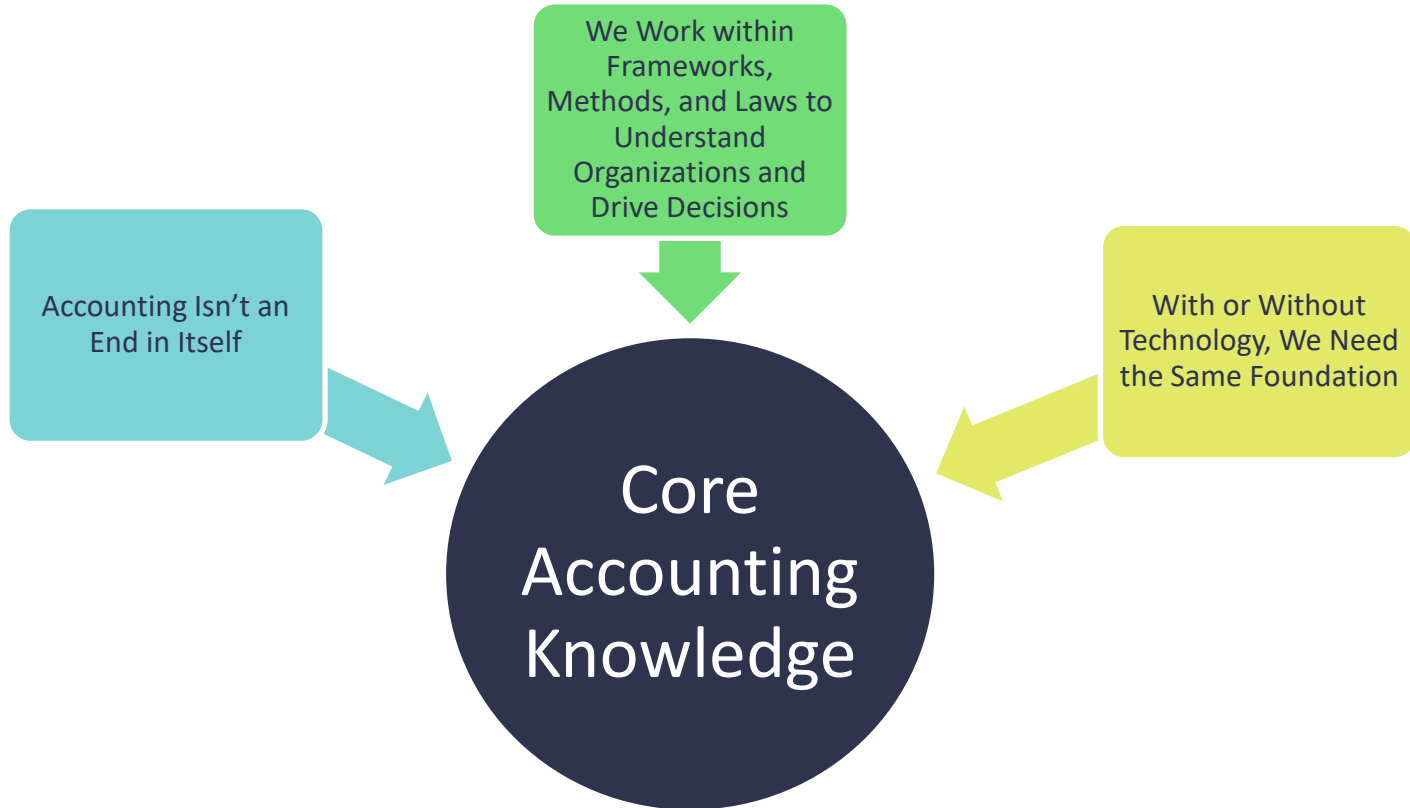
How to Prepare and Adopt

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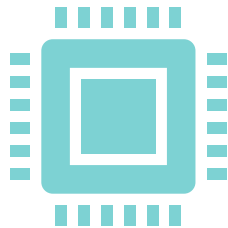
What's not going to change?



What is going to change?

We Have to Become “And” Professionals

Becoming “And” Professionals



Shift Towards Specialty Skills

Data Analysis
IT Environment
Cybersecurity
Industry
Deep Tax Specialization
Reporting Beyond Financials (e.g., ESG)



Importance of Soft Skills

Ability to Adapt to Change
Curiosity & Continuous Learning
Understanding Processes
Understanding Rules & Logic



Citizen Development to Move Faster

Definition

Citizen Development is the practice of non-technical employees creating software applications, tools, and solutions to address specific business needs, without relying on traditional IT or external developers.

Key Characteristics

- **User-Friendly Tools:** Citizen developers use low-code/no-code platforms with intuitive interfaces.
- **Business-Centric:** Focuses on solving real business challenges and improving processes.
- **Empowerment:** Enables employees to become creators and innovators.



Citizen Development to Move Faster

Data Analytics

Ingestion and
Summarization

Memos and
Letters

Administrative
Tasks

Importance of Accounting Foundation



- Citizen development and data analytics give huge opportunity... **BUT**
- Computers are not smart... **SO**
- Accountants must understand framework thoroughly enough to **make complex topics simple**



Tips for Using Generative AI

Understand the Limitations

Talk to it as a Human (not as a Search Engine)

Provide Details and Context

Correct and Refine Results

Expect Blank Paper → Rough Draft (Not Final Document)



Preparing for Innovation

Technology Examples

Excel Pivot Tables

Excel's Data Model

Alteryx

Power BI

Power Automate

Power Apps

ChatGPT and Copilot

General Skills

Experience with Data

Asking Questions

Being Specific

Understanding Processes

Understanding Framework



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