



2025 WICPA ACCOUNTING TECHNOLOGY CONFERENCE

YOUR SOURCE FOR KEY UPDATES & INSIGHTS ON TIMELY ISSUES

HIGHLIGHTED TOPICS:



ASK THE EXPERTS

Get your burning questions answered by leading experts on all things related to CPA technology



MICROSOFT 365: SUPERCHARGING CPA PRODUCTIVITY

Uncover the hidden gems of Microsoft 365 to elevate your productivity and streamline your processes



SMART TECH, SOUND JUDGMENT: NAVIGATING AI RESPONSIBLY

Learn how to balance innovation with ethical obligations to maintain trust and integrity

THURSDAY, DEC. 4 | WICPA OFFICE & WICPA CPE LIVESTREAM

2025 WICPA ACCOUNTING TECHNOLOGY CONFERENCE

MATERIALS AT A GLANCE

The following materials are from the morning sessions of the 2025 WICPA Accounting Technology Conference held on Thursday, Dec. 4, including:

- Technology Update: Emerging Trends That Matter
- Microsoft 365: Supercharging CPA Productivity
- AI-Powered Excel: Transforming Workflows With Copilot

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CYBER
THREATS ARE
INCREASING
EVERY DAY.

75%

of accounting firms believe they would only be able to survive **three to seven days** after a ransomware attack.

Source: www.cpapracticeadvisor.com



Choose Ontech to protect your data

1

Expertise in Cybersecurity

Robust security for your sensitive data

2

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AICPA Code of Conduct & IRS Guidelines

3

Proactive Monitoring/Support

Respond quickly to minimize downtime

4

Customized Solutions

Designed to meet specific CPA firm needs

5

Training & Awareness

Helping your staff recognize cyber threats



Ontech's tailored solutions and transparent billing make us the ideal choice for CPAs and accountants. Don't wait to safeguard your data. Contact Ontech Systems today for a **FREE risk assessment** of your network!

75%

of accounting firms believe they would only be able to survive **three to seven days** after a ransomware attack.

Source: www.cpapracticeadvisor.com

CPA firms are increasingly targeted due to their access to sensitive financial information. Since 2014 reported data breaches of CPA firms have increased **over 80%** with ransomware extortion incidents rising to **over 40%** since 2018.

Choosing Ontech to manage your CPA firm's IT & protect your data can offer several advantages:

- Expertise in Cybersecurity:** Our staff specializes in cybersecurity to ensure your firm's sensitive financial data is protected against the latest threats. We always implement robust security measures & regular security audits.
- Compliance with Regulations:** Ontech helps ensure your firm complies with industry regulations and standards, such as the AICPA Code of Professional Conduct and IRS guidelines for safeguarding taxpayer data.
- Proactive Monitoring and Support:** We provide continuous monitoring to detect & respond to potential threats quickly. This proactive approach minimizes downtime and keeps your operations running smoothly.
- Customized Solutions:** Our team offers tailored IT solutions to meet the specific needs of CPA firms. This includes secure cloud services, data backup and recovery, and network management.
- Training and Awareness:** They also provide training for your staff to recognize and respond to cyber threats, enhancing your firm's overall security posture.

Our tailored solutions, transparent billing, and commitment to minimizing technical issues make it an ideal choice for CPA's and accountants. Let us help safeguard your critical data!



Get a free risk assessment of your firm's network today at www.ontech.com!

FTC SAFEGUARD CHECKLIST

WHO'S AFFECTED & WHAT'S REQUIRED



The **FTC Safeguards Rule** applies to “**financial institutions**”, including:



Car Dealerships



Retailers



Tax Preparers



Accounting Firms



Loan Companies



Any Business **Collecting Financial Data!**

Here's What's Required To Stay Compliant:



Designate a Qualified Individual

Assign someone (**internal or outsourced**) to be responsible for your information security program.



Conduct a Risk Assessment

Identify internal and external risks to customer data. This is ongoing, **not a one-time event!**



Train Your Team

Security is everyone's responsibility, so your employees need ongoing training on data protection and phishing awareness. **We can help with this!**



Monitor Your Service Providers

If you outsource IT, payroll, marketing, or data processing, **those vendors must also comply.**



Keep It Updated

Regularly review and **adjust** your security program as your business or threats evolve.



Implement Safeguards

Based on your risk assessment, put the right controls in place. **These typically include:**

- Access controls (who can access what, and why)
- Encryption of customer data
- Multi-Factor Authentication (MFA)
- Secure data disposal policies
- Logging and monitoring access and activity



Create an Incident Response Plan

Be ready with a plan if (**or when**) a data breach occurs. The FTC expects a **structured response strategy.**

Why It Matters: *Non-compliance can lead to:*



Hefty fines



Damaged reputation



Loss of trust with customers

Luckily, we help local businesses like yours **navigate FTC requirements with confidence!**

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Technology Trends Update: Emerging Trends That Matter



Set your browser to
HIGGINS.CNF.IO
For interactive polling
and Q & A

Presented By
John H. Higgins, CPA.CITP
Higgins Advisory, LLC - Rochester, Michigan

Learning Goals



- Understand key technology trends for enhancing efficiency and decision-making processes for CPAs
- Recognize opportunities for you to embrace these technologies to improve your professional skills and career opportunities

Set your browser to
HIGGINS.CNF.IO
For interactive polling
and Q & A

John H. Higgins, CPA.CITP

Strategic Technology Advisor



john@higginsadvisoryllc.com

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Nationally recognized thought leader, advisor, author and speaker on CPA technology

Strategic technology advisor to the profession w/ 35+ years of experience

Founded and sold two CPA technology advisory startups

Former National Mid-market Technology Partner - BDO

CPA Practice advisor Top 25 Thought Leader for the CPA profession

AICPA Business & Industry Hall of Fame Inductee

Past Chair of the Michigan Association of CPAs

Passionate advocate for the CPA profession!

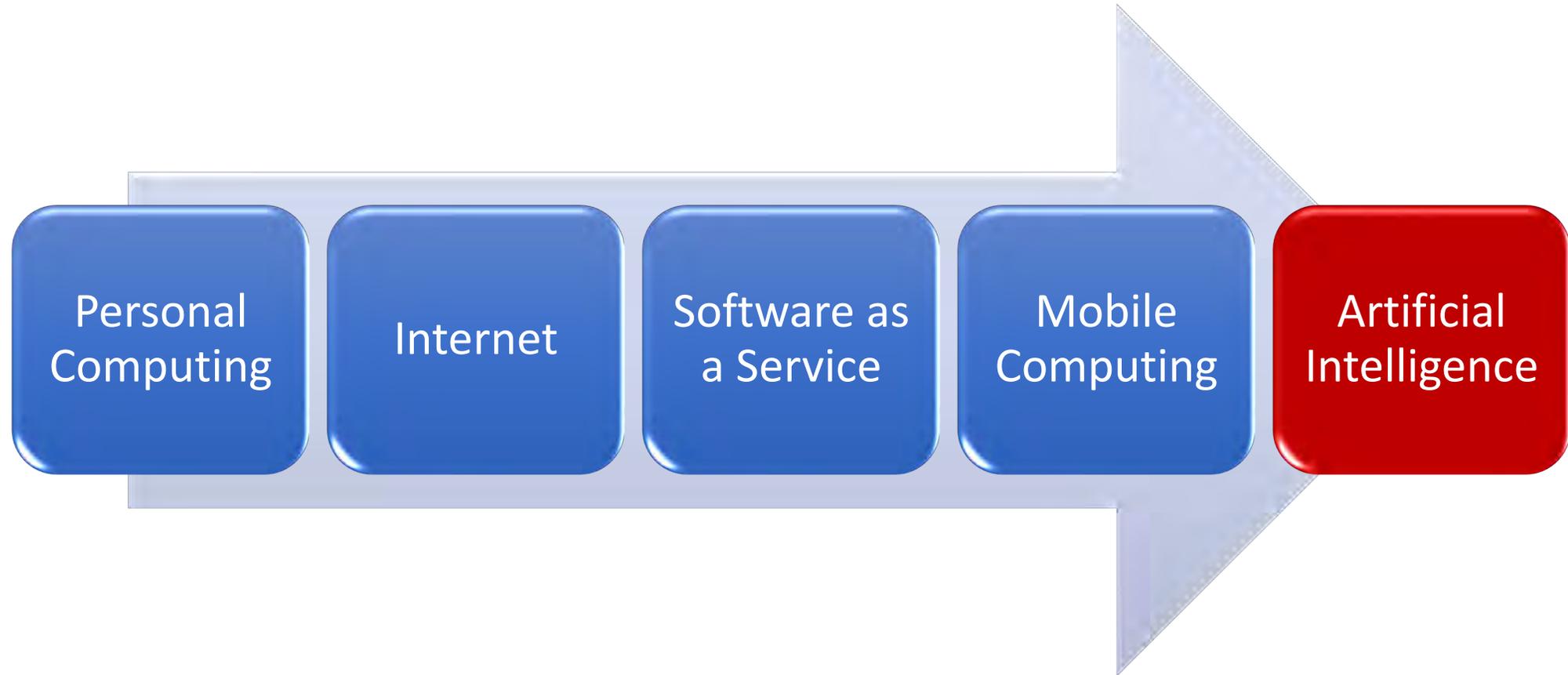
Presentation Outline

- Technology Trends Overview – The Big Picture
- Artificial Intelligence
- Application Software Trends
- Blockchain, Smart Contracts & Digital Assets
- Challenges & Opportunities for CPAs

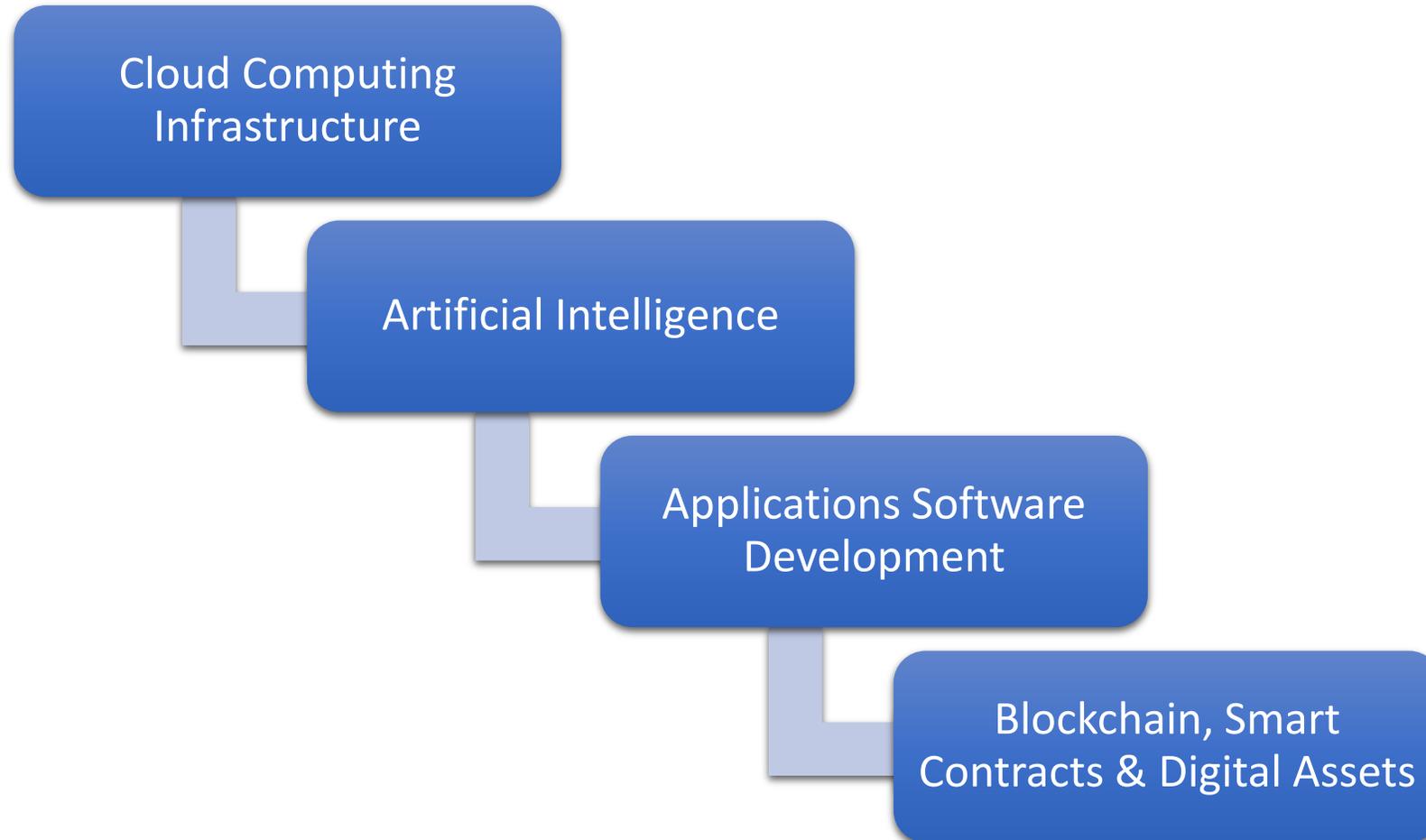
TECHNOLOGY TRENDS OVERVIEW – THE BIG PICTURE



Evolution of Modern Business Technology



Current Technology Megatrends



Today's Technology Challenges

Developing an understanding of opportunities

Pace and timing of adoption

Integration into current workflows

Transformation of required skillset

Data privacy concerns

Strategic planning and budget allocation

Integration of artificial intelligence & humanity

ARTIFICIAL INTELLIGENCE

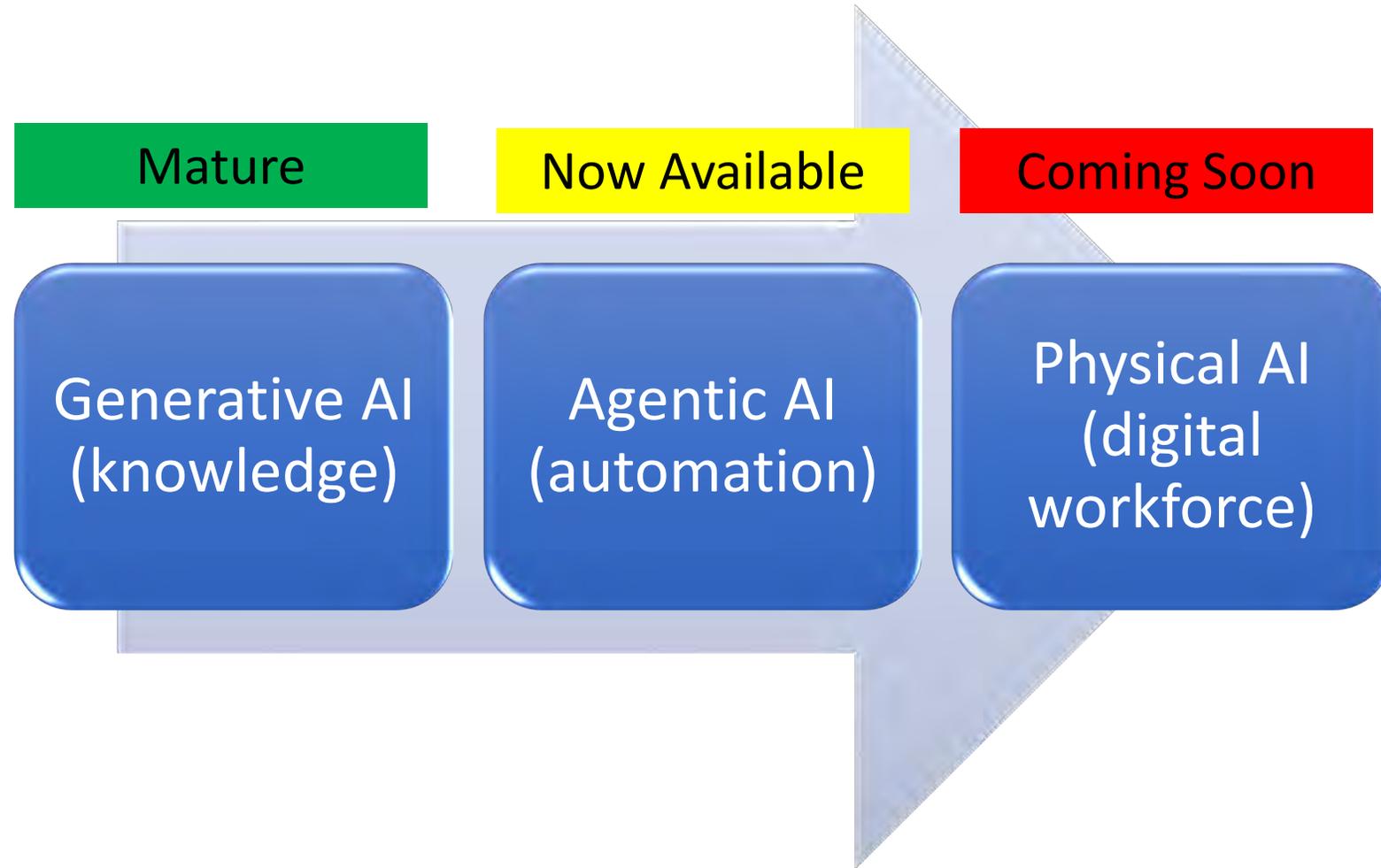


Salesforce and AI

This is the first time in Salesforce 25-year history that we are budgeting for zero increase in our software engineering team. AND we are projecting a 30% increase in productivity from our existing team!

Marc Benioff, CEO & Co-Founder
Salesforce

AI Technology Evolution



Microsoft and AI

I think the notion that business applications exist, that's probably where they'll all collapse, right in the agent era!

Satya Nadella, Chairman and CEO
Microsoft

Key AI Infused Trends

Autonomous
Everything

Vibe Coding

Intelligent
Wearables

Humanoid Robots

BCI (Brain
Computer
Interface)

Artificial General
Intelligence (AGI)

Artificial Super
Intelligence (ASI)

Disintermediation

AI Technology Ingredients

Raw Materials

- Processors
- Energy
- Data Centers

Cloud Infrastructure

- AWS (Amazon)
- Azure (Microsoft)
- Google Cloud

Foundation LLM Models

- ChatGPT (Open AI)
- Gemini (Google)
- Grok (xAI)
- Llama (Meta)

Application DLM Models

- Tax
- Audit
- Accounting
- Copilot
- Industry / Enterprise

Popular Generative AI Apps

- [ChatGPT \(OpenAI\)](#)
- [Claude \(Anthropic\)](#)
- [Copilot \(Microsoft\)](#)
- [Gemini \(Google\)](#)
- [Llama \(Meta\)](#)
- [Perplexity AI](#)
- [xAI \(Elon Musk\)](#)

Multimodal Generative AI

Inputs

- Text
- Audio
- Video
- Images

Outputs

- Text
- Audio
- Video
- Images

Agentic AI – The Next Frontier

Autonomous systems
that execute tasks
without constant
oversight

Optimize processes and
solve problems

Assess information
within a given context
and apply reasoning to
determine the most
effective course of action

Agentic AI Examples

- **Smart Home Manager** – An agentic AI adjusts lighting, temperature, and security settings based on user habits, weather conditions, and occupancy, optimizing comfort and energy efficiency without manual input.
- **Smart Email Assistant** – An agentic AI monitors your inbox, prioritizes important emails, drafts replies, schedules meetings, and follows up on unanswered messages—all without needing constant input.

Physical AI – The Future



- AI-powered robots interacting with the physical world
- Combines AI, IoT sensors, and automation for real-world tasks
- Bridges digital intelligence with physical action
- Adapts, learns, and performs tasks autonomously



Humanoid Robot Demo

The AI Arms Race

- \$100m plus signing bonuses
- \$400b annual capital expenditures
- Mega data centers everywhere
- Energy any way they can get it



AI Segment Summary

- AI is the most transformative technology ever!
- The technology is evolving very rapidly
- Learning how to leverage it provides a substantial competitive edge
- We are still at the infancy of AI technology

APPLICATION SOFTWARE TRENDS



Software Categories



Trends In Software Applications

All applications continue the move to SaaS

Cross vendor integration is simplified and more prevalent

Specific business process solutions outpace enterprise solutions

Integrated dashboard reporting is “table stakes” to be competitive

Embedded AI capabilities are evolving rapidly

CPA Practice Solutions



CPA Practice Solutions Trends

Wolters Kluwer / Thompson Reuters / Intuit dominate market share

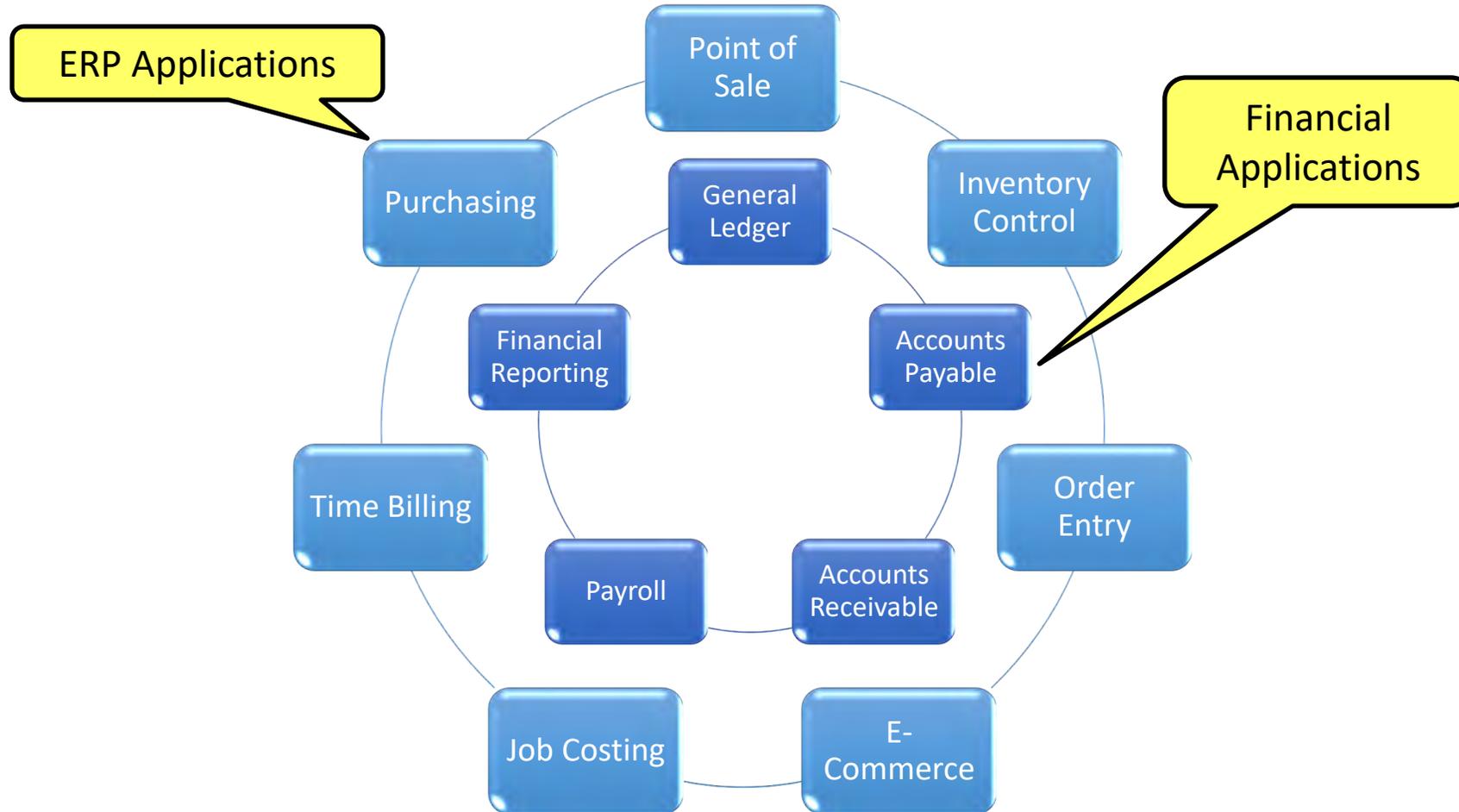
Dynamic Audit Solution (DAS) from CaseWare is progressing slowly

Abundance of startup solution providers

A lot of activity in AI based tax document organizers

Over abundance of niche applications

Business Enterprise Solutions



Business Enterprise Solutions Trends

- [NetSuite](#) / [MS Dynamics](#) / [Sage Intacct](#) / [SAP](#) / [Intuit](#) lead the financial and ERP market
- Emphasis on business process specific solutions
 - ✓ Customer Service – [Salesforce](#)
 - ✓ Workflow Automation – [ServiceNow](#)
 - ✓ Corporate Tax Compliance – [Avalara](#)
 - ✓ Cash Management – [Bill](#)
 - ✓ Expense Management - [Concur](#)

KPI Dashboards – The New Reporting Model



Create Visual Dashboards

Measures

- Metrics / results to display

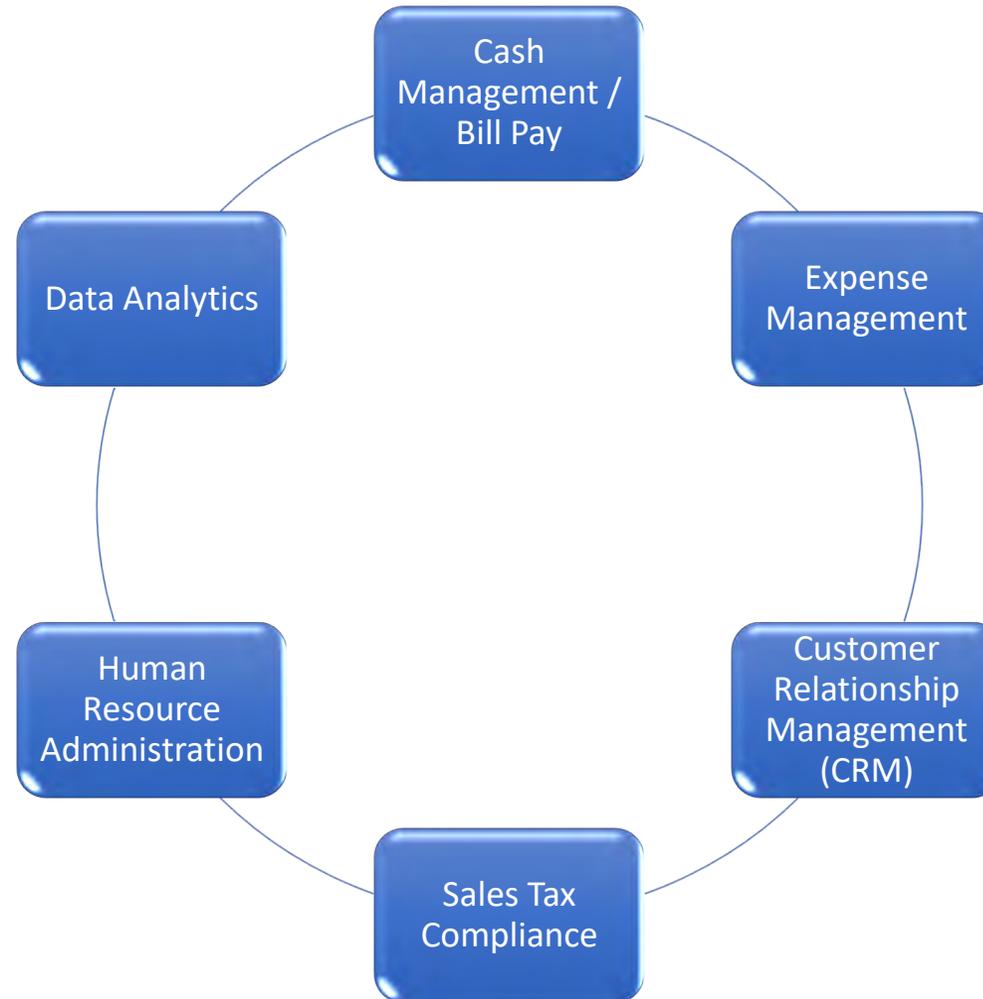
Visuals

- How to present the metrics
- Data table vs. chart

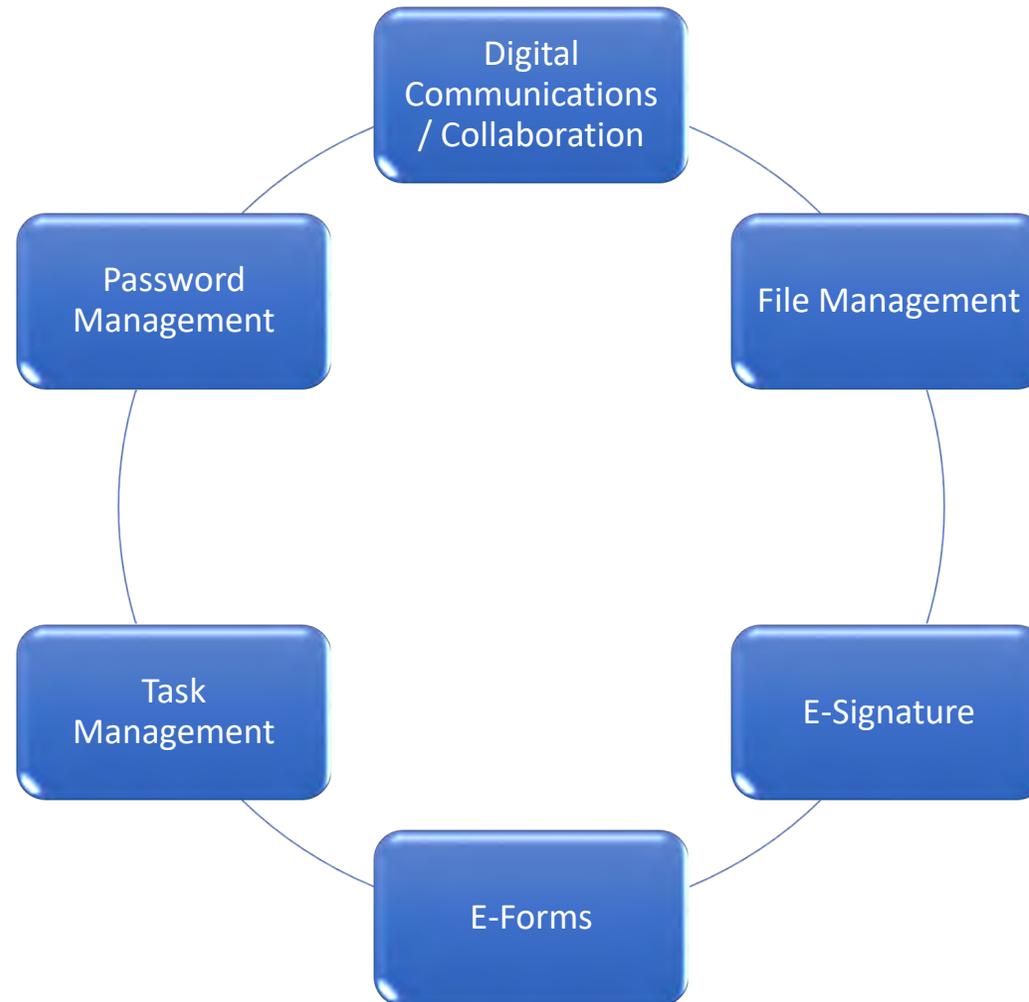
Filters

- Select data subsets to measure
- Embedded or user managed

Business Process Solutions



Personal Productivity Solutions





Blockchain is a revolutionary way to
validate, record and preserve
information digitally and enables
smart contracts

Existing and Emerging Blockchain Applications

- Cryptocurrency
- Smart Contracts
- Supply Chain Management
- Real Estate
- Healthcare Records
- Voting systems



Smart contracts are self-executing digital agreements with predefined terms, automatically enforced on a blockchain without intermediaries.

Smart Contracts



- Automatic self executing contracts
- Written in programming code
- Deployed and run on a blockchain
- Transparent for participants
- Ethereum is the leading platform in the deployment of smart contracts

Smart Contract Example (Not-for-Profit Grant Disbursement)

Step 1: Funding Setup

Foundation deposits \$250,000 into a blockchain-based smart contract with milestone triggers.

Step 2: Milestone Triggers

Tranche 1 (\$100k): After board-approved budget validated by auditor.

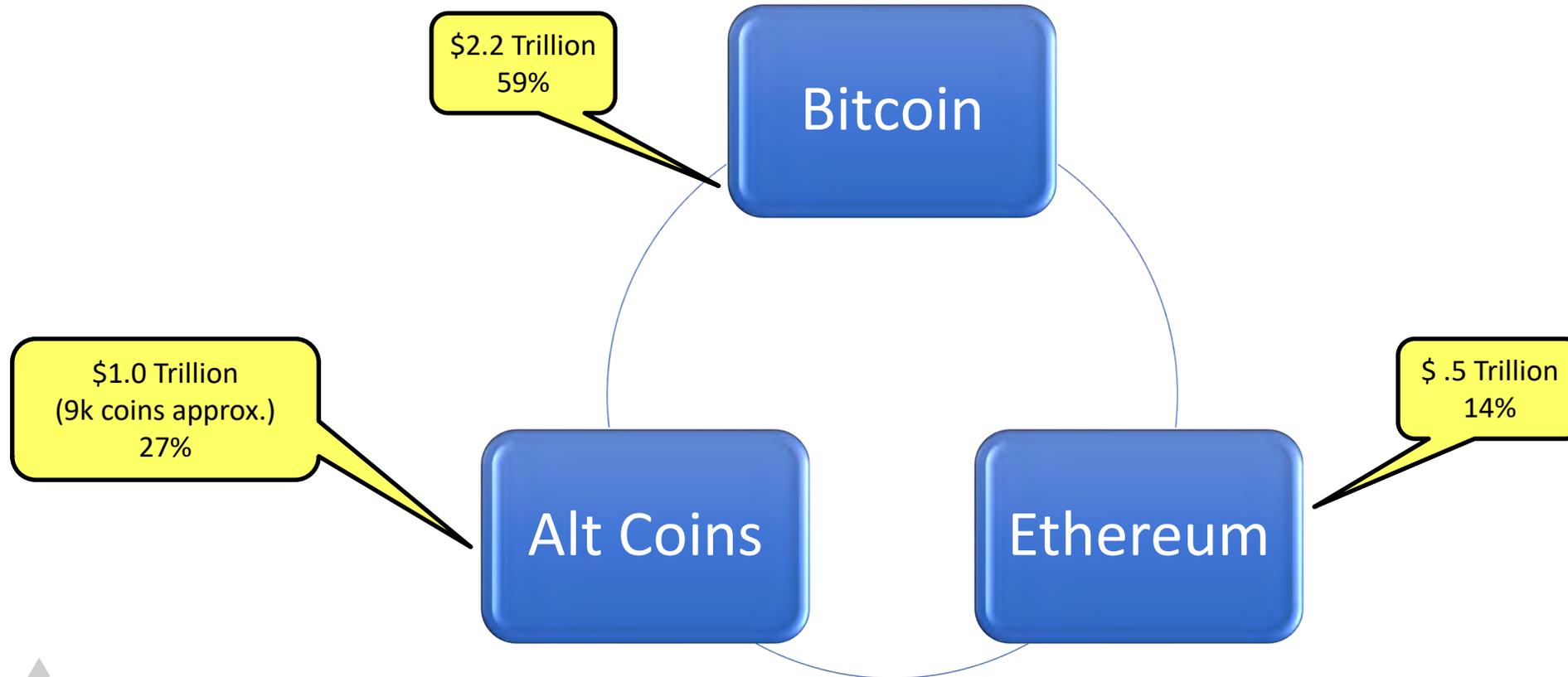
Tranche 2 (\$100k): After 50,000 meals verified via API.

Tranche 3 (\$50k): Upon mid-year report submission; otherwise funds revert.

Step 3: Automated Execution

Contract verifies inputs, logs all events immutably, and transfers funds automatically.

Bitcoin, Ethereum & Alt Coins – Market Cap



CHALLENGES & OPPORTUNITIES FOR CPAS



Unprecedented
opportunity to
maximize
productivity

Multitude of paths
to provide client
advisory services

Learning has never
been easier

Clients will be
better informed

Developing AI skills
is imperative

Client fee models
need to tie to
results, not efforts

Questions ?



Thank you!!!

Let's connect on LinkedIn →





**Wisconsin Institute of
Certified Public Accountants**

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Excel Accuracy Unleashed: Mastering Error Detection

Developed by Bryan L. Smith, CPA.CITP, CISA

In Waukesha, WI on December 4, 2025, 9:25-10:40am



Bryan L. Smith, CPA.CITP, CISA

- Owner DataSmithPro, LLC
- Co-founder of CPA Crossings, LLC
- Strategic technology advisor to CPAs w/ 40+ years of experience
- Nationally recognized author and presenter on CPA technology
- Extensive knowledge and experience in proper Excel design techniques as well as helping CPAs build spreadsheets that are accurate
- As a Certified Information Systems Auditor (CISA), spent a considerable amount of time auditing and validating thousands of Excel spreadsheets
- Developed various data analysis and Microsoft Power BI courses and has worked with multiple organizations to train and coach staff on proper data analysis techniques
- Masters of Science in Information Assurance (MSIA)

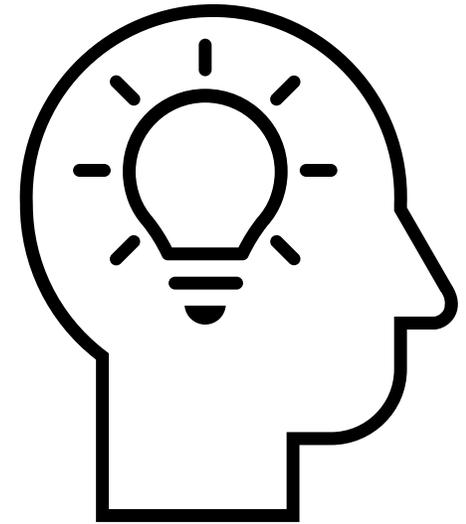
Presentation Outline

Click links to navigate to
specific section ----- >



- [Understanding Common Excel Errors](#)
- [Advanced Formulas and Functions](#)
- [Data Validation Techniques](#)
- [Error Tracing and Auditing Tools](#)
- [Wrap-Up](#)

Understanding Common Excel Errors



The slides in this presentation contain many screenshots of the Excel application in order to demonstrate particular features and functionality.

These screenshots were taken during the development of this course. However, Microsoft updates the apps regularly and it becomes difficult to constantly update the screenshots. Therefore, please note that screenshots may vary from your actual version, but the overall functionality remains the same.

Note About Screen Shots

Errors In Excel

Research shows 80%+ of spreadsheets have errors

- The more complex, the higher the %

A lot going on in people's spreadsheets

- Many errors go nowhere
- Decisions aren't being made from errors
- Quick Google search finds billions in financial losses due to errors in spreadsheets

Overconfidence that if there is no error message it is accurate

When Formulas Result in Errors

Certain types of errors will provide messages

Not ALL errors have messages

Excel uses the # sign for build-in errors in formulas

- These are the easiest to find and fix

Formulas errors that don't result in #errors are hard to find

- Provides false sense of accuracy

#Errors

Error Message	Explanation
#N/A	This error indicates that a value is not available to a function or formula. MOST commonly found in Lookup functions where the lookup value is not in the list.
#DIV/0!	This error indicates a number is divided either by zero (0) or by a cell that contains no value.
#NAME?	This error indicates a name is used but it has not been defined or you are using an older version of Excel & spreadsheet contains a new formula (will be preceded with _xlfn.).
#VALUE!	This error indicates the formula includes cells that contain different data types. (i.e., the formula is expecting a number and it contains text.).
#REF!	This error indicates the formula refers to an invalid cell. MOST commonly found when a row or column is deleted when a value in that range is used in a formula.
#NULL!	In Excel formulas, the space character works as an intersection operator. An error occurs when you specify an intersection of two areas (ranges) on a worksheet that do not intersect.
#NUM!	This error indicates that a formula or function contains invalid numeric values. HERE FV is less than PV so PMT should be negative number.
#CALC!	This error occurs when Excel's calculation engine encounters a scenario it does not currently support. MOST often related to array formulas. HERE the FILTER function returns an empty array.
#SPILL!	This error occurs when a Dynamic Array Formula spills into non-empty cells.
#SPILL!	This error can also occur when a Dynamic Array Formula is used in Excel Tables.
#####	This error occurs when the column width for the subject cell is not enough to contain the value you're trying to fit in.

Finding #Errors

Use formula to check for errors

Use Find & Search - Go To Special

Use Find - Find All

Use Formula Auditing - Error Checking

Create a Visual Basic Macro that finds and highlights

Finding #Errors - Use Formula to Check For Errors

Using SUM function on a range that contains an error, returns error

- SUM function calculates no matter what are in cells in the range

Use ISERROR with IF to provide custom message

Best used with a range of formulas or a table

Not efficient to use when there are many Worksheets

- Best to use another Error Checking method

Finding #Errors - Example: Use Formula to Check For Errors

	A	B	C	D	E	
1						
2	Use Formula to Check For Errors					
3	Description	Formula Result*	FORMULATEXT			
4	SUM on a Range	#SPILL!	=SUM(ErrorResults!D12:L26)			
5	SUM on a Table	#N/A	=SUM(Table1[#All])			
6	SUM on a Sheet	#N/A	=SUM(ErrorResults!1:1048576)			
7	SUM on a Workbook	#N/A	=SUM(ErrorResults:Sheet1!1:1048576)			
	SUM on Workbook with Hidden Sheets					
8						
9	SUM on Workbook with Hidden Sheets, manually change formula	#VALUE!	=SUM(Sheet1:Sheet2!1:1048576)			
10						
11						
12	* NOTE: Formula Result will display FIRST error, starting top left and working Row by Row.					
13						

Finding #Errors - Use Find & Search - Go To Special

Selects ALL cells that include #Error

Use Fill Color to highlight selected cells

Works on only ONE Worksheet at a time

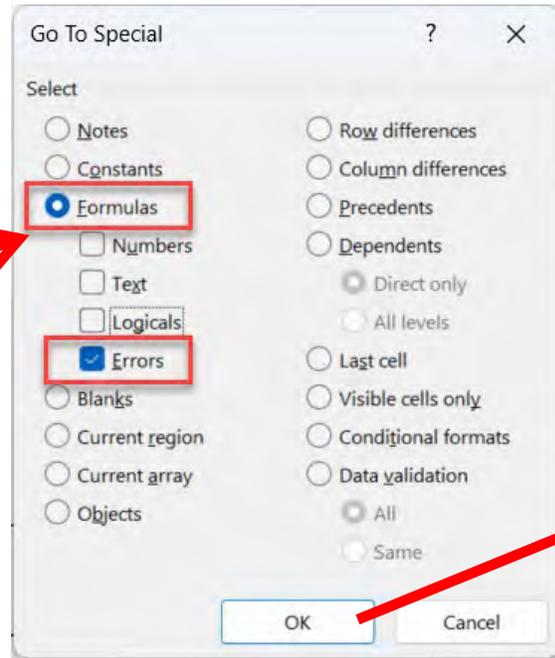
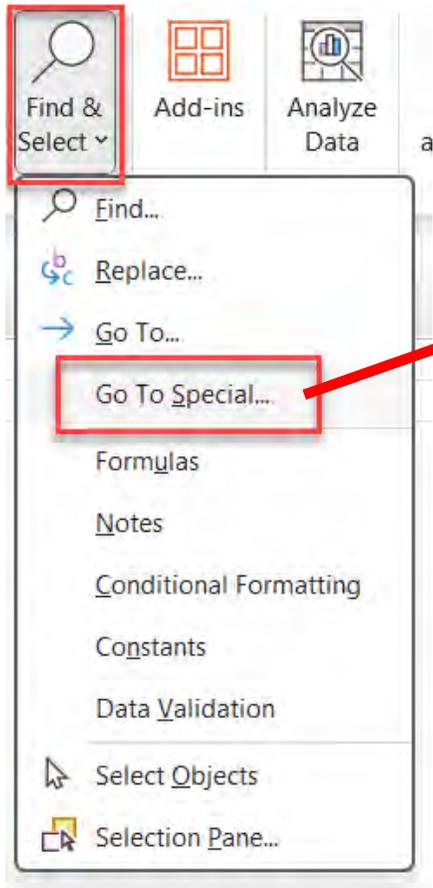
- You would have to repeat process for each Worksheet
- Not efficient to use when there are many Worksheets

After highlighting, would have to hunt down cells

- Could use the Find feature to Find highlighted cells

Finding #Errors - Example

Use Find & Search - Go To Special



	A	B	C	D	E	F	G
1							
2							#VALUE!
3	#VALUE!						
4				#VALUE!			
5							
6							
7		#VALUE!					
8							
9							
10				#VALUE!			
11	#VALUE!						
12							

Finding #Errors - Example

Use Find & Search - Go To Special (Highlighted)

The image illustrates the process of finding #VALUE! errors in Excel using the Find & Select -> Find -> Find and Replace -> Find Format -> Fill sequence. The spreadsheet shows several cells containing #VALUE! errors, which are highlighted in yellow. The 'Find & Select' menu is open, and the 'Find...' option is selected. The 'Find and Replace' dialog box is open, and the 'Format...' button is selected. The 'Find Format' dialog box is open, and the 'Fill' tab is selected, with a yellow color chosen from the color palette. Red arrows indicate the flow of the process from the spreadsheet to the menus and dialog boxes.

Finding #Errors - Use Find - Find All

Find what: = #*!

- With "*" being a wildcard
- So starts with # and ends with !

Within: = Workbook

Look in: = Values

Finds ALL matching values in "visible" sheets

Does NOT find matching values in "hidden" sheets

Finding #Errors - Example

Use Find - Find All

	A	B	C	D
1				
2			#VALUE!	
3				
4			#1	
5				
6				

Find what: = #*!
does not find #1

Can now select each row to go to and view/fix #Error

Note 1: Find boxes are remembered until ALL workbooks are closed

Note 2: Find dialog box will "float" as you work in Excel

Book	Sheet	Name	Cell	Value
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	ErrorResults		\$B\$3	#DIV/0!
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	ErrorResults		\$B\$5	#VALUE!
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	ErrorResults		\$A\$6	=#REF!
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	ErrorResults		\$B\$6	#REF!
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	ErrorResults		\$B\$7	#NULL!
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	ErrorResults		\$B\$8	#NUM!
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	ErrorResults		\$B\$9	#CALC!
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	ErrorResults		\$B\$10	#SPILL!
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	ErrorResults		\$B\$11	#SPILL!
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	ErrorResults		\$A\$14	#VALUE!
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	ErrorResults		\$K\$15	#SPILL!
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	FormulaCheckErrors		\$B\$4	#SPILL!
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	FormulaCheckErrors		\$B\$9	#VALUE!
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	GoToSpecial		\$G\$2	#VALUE!
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	GoToSpecial		\$A\$3	#VALUE!
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	GoToSpecial		\$D\$4	#VALUE!
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	GoToSpecial		\$B\$7	#VALUE!
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	GoToSpecial		\$D\$10	#VALUE!
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	GoToSpecial		\$A\$11	#VALUE!
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	GoToSpecial		\$B\$98	#VALUE!
Oxls115W2_PM01_FindingErrors_v2405_1.xlsx	FindAll		\$C\$2	#VALUE!

21 cell(s) found

Finding #Errors - Use Formula Auditing - Error Checking

On the Formulas Ribbon

Finds each error

- Provides some help with each #Error type

Finds other errors per Error Checking Rules

Works on only ONE Worksheet at a time

- You would have to repeat process for each Worksheet
- Not efficient to use when there are many Worksheets

Finding #Errors - Example

Use Formula Auditing - Error Checking



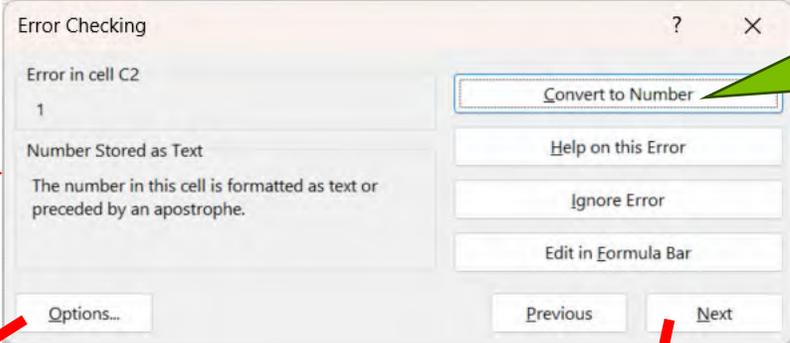
Formulas Data Review View Automate Developer Add-ins Help Acrobat Power Pivot

Lookup & Reference Math & Trig More Functions

Name Manager Defined Names

Trace Precedents Trace Dependents Remove Arrows Evaluate Formula Formula Auditing

Error Checking



Error in cell C2

1

Number Stored as Text

The number in this cell is formatted as text or preceded by an apostrophe.

Options...

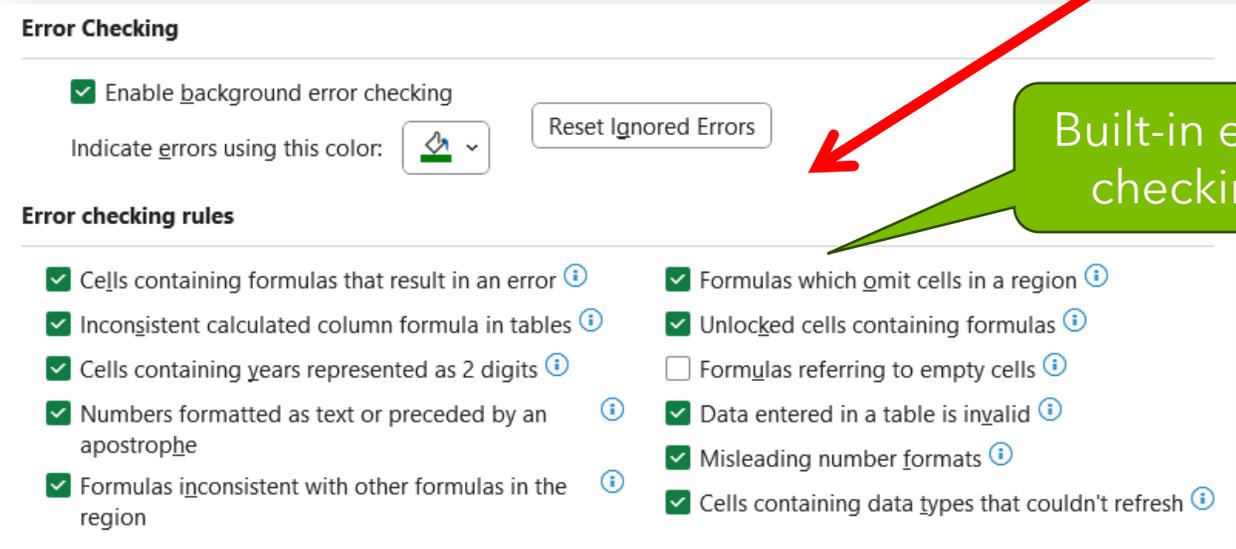
Convert to Number

Help on this Error

Ignore Error

Edit in Formula Bar

Previous Next



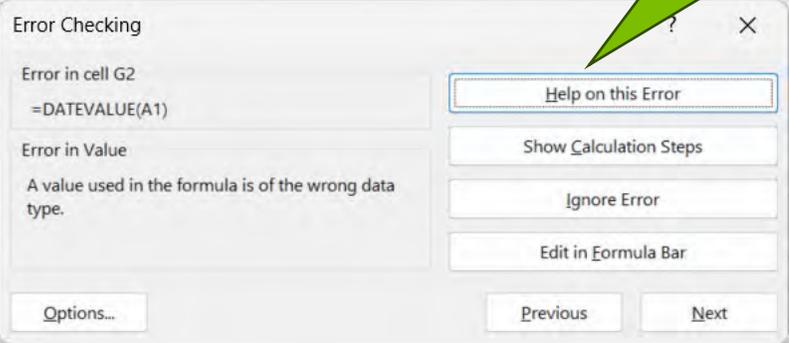
Error Checking

Enable background error checking

Indicate errors using this color:  Reset Ignored Errors

Error checking rules

<input checked="" type="checkbox"/> Cells containing formulas that result in an error	<input checked="" type="checkbox"/> Formulas which omit cells in a region
<input checked="" type="checkbox"/> Inconsistent calculated column formula in tables	<input checked="" type="checkbox"/> Unlocked cells containing formulas
<input checked="" type="checkbox"/> Cells containing years represented as 2 digits	<input type="checkbox"/> Formulas referring to empty cells
<input checked="" type="checkbox"/> Numbers formatted as text or preceded by an apostrophe	<input checked="" type="checkbox"/> Data entered in a table is invalid
<input checked="" type="checkbox"/> Formulas inconsistent with other formulas in the region	<input checked="" type="checkbox"/> Misleading number formats
	<input checked="" type="checkbox"/> Cells containing data types that couldn't refresh



Error in cell G2

=DATEVALUE(A1)

Error in Value

A value used in the formula is of the wrong data type.

Options...

Help on this Error

Show Calculation Steps

Ignore Error

Edit in Formula Bar

Previous Next

Stops at ALL built-in error checks

Provides "some" help

Built-in error checking

Finding #Errors - Create a Visual Basic Macro

Need to learn Visual Basic

- Can be complex
- Could use AI (ChatGPT/Copilot) to help you write code

To keep with Workbook, but save a .xlsm file

- Makes it harder to share

Beyond the scope of this course to write the code

- However, we will look at an example

Finding #Errors - Example

Create a Visual Basic Macro

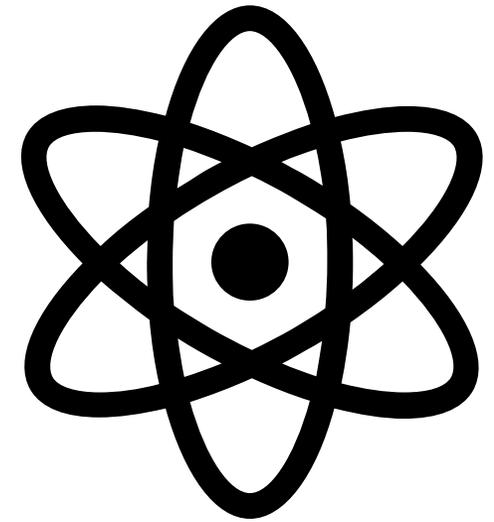
I used ChatGPT with the following message:

Create excel macro that finds formula errors in all sheets including hidden sheets of a workbook and create a new sheet that has a hyperlink to each error

Result of Visual Basic Macro

	A	B	C	D	E	F
1	Sheet	Cell	Error			
2	ErrorResults	\$B\$2	#N/A			
3	ErrorResults	\$B\$3	#DIV/0!			
4	ErrorResults	\$B\$4	#NAME?			
5	ErrorResults	\$B\$5	#VALUE!			
6	ErrorResults	\$B\$6	#REF!			
7	ErrorResults	\$B\$7	#NULL!			
8	ErrorResults	\$B\$8	#NUM!			
9	ErrorResults	\$B\$9	#CALC!			
10	ErrorResults	\$B\$10	#SPILL!			
11	ErrorResults	\$B\$11	#SPILL!			
12	ErrorResults	\$A\$14	#VALUE!			
13	ErrorResults	\$K\$15	#SPILL!			
14	HiddenError	\$B\$3	#VALUE!			
15	FormulaCheckError:	\$B\$4	#SPILL!			
16	FormulaCheckError:	\$B\$5	#N/A			
17	FormulaCheckError:	\$B\$6	#N/A			
18	FormulaCheckError:	\$B\$7	#N/A			
19	FormulaCheckError:	\$B\$9	#VALUE!			
20	GoToSpecial	\$G\$2	#VALUE!			
21	GoToSpecial	\$A\$3	#VALUE!			
22	GoToSpecial	\$D\$4	#VALUE!			
23	GoToSpecial	\$B\$7	#VALUE!			

Advanced Formulas and Functions



Functions for Error Detection

2 Categories

- IF functions
- IS functions

IF functions return value based on condition

IS functions return TRUE or FALSE based on condition

- Need to use IF functions to return a value
- Use SUMPRODUCT to test array/range

IF Functions

IF(logical_test, value_if_true, [value_if_false])

- Returns one value if logical_test is True and another if it is False

IFERROR(value, value_if_error)

- Returns the value you specify if a formula evaluates to an error; otherwise, it returns the result of the formula.

IFNA(value, value_if_na)

- Returns the value you specify if a formula returns the #N/A error value; otherwise, it returns the result of the formula.

IS Functions

Syntax =
isfunction(value)

- ISBLANK - Returns TRUE if the value is blank
- ISERR - Returns TRUE if the value is any error value except #N/A
- ISERROR - Returns TRUE if the value is any error value
- ISEVEN - Returns TRUE if the number is even
- ISFORMULA - Returns TRUE if there is a reference to a cell that contains a formula
- ISLOGICAL - Returns TRUE if the value is a logical value
- ISNA - Returns TRUE if the value is the #N/A error value
- ISNONTTEXT - Returns TRUE if the value is not text
- ISNUMBER - Returns TRUE if the value is a number
- ISODD - Returns TRUE if the number is odd
- ISREF - Returns TRUE if the value is a reference
- ISTEXT - Returns TRUE if the value is text

SUMPRODUCT to Test Array/Range

- Idea: Count the # of cells in a range that meets a condition
- Use IS function, but how do we count it?
 - Use the SUMPRODUCT function, which sums the product of an array
 - So, =SUMPRODUCT(--ISfunction(array))
 - ❖ Where, -- (operator) says "meet this criteria"

SUMPRODUCT Example

Formulas are counting items in Value column

	A	B	C	D
1	Description	Formula Result	FORMULATEXT	Value
2	ISBLANK		2 =SUMPRODUCT(--ISBLANK(\$D\$2:\$D\$10))	
3	ISERR		1 =SUMPRODUCT(--ISERR(\$D\$2:\$D\$10))	#N/A
4	ISERROR		3 =SUMPRODUCT(--ISERROR(\$D\$2:\$D\$10))	#VALUE!
5	ISFORMULA		5 =SUMPRODUCT(--ISFORMULA(\$D\$2:\$D\$10))	0
6	ISLOGICAL		1 =SUMPRODUCT(--ISLOGICAL(\$D\$2:\$D\$10))	TRUE
7	ISNA		2 =SUMPRODUCT(--ISNA(\$D\$2:\$D\$10))	#N/A
8	ISNONTEXT		8 =SUMPRODUCT(--ISNONTEXT(\$D\$2:\$D\$10))	
9	ISNUMBER		2 =SUMPRODUCT(--ISNUMBER(\$D\$2:\$D\$10))	123
10	ISTEXT		1 =SUMPRODUCT(--ISTEXT(\$D\$2:\$D\$10))	abc
11				
12	These Functions don't work with SUMPRODUCT because look for single value			
13	ISEVEN			
14	ISODD			
15	ISREF			

Final Thoughts on Error Formulas

Use to trap errors

May mask errors

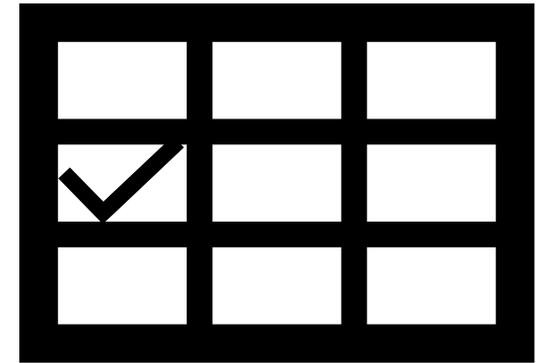
- Especially by those who lack training

Focus on finding errors

Use caution when eliminating errors

- Errors point out issues with your spreadsheet

Data Validation Techniques



Data Validation in Excel

Define restrictions on what data can or should be entered in a cell

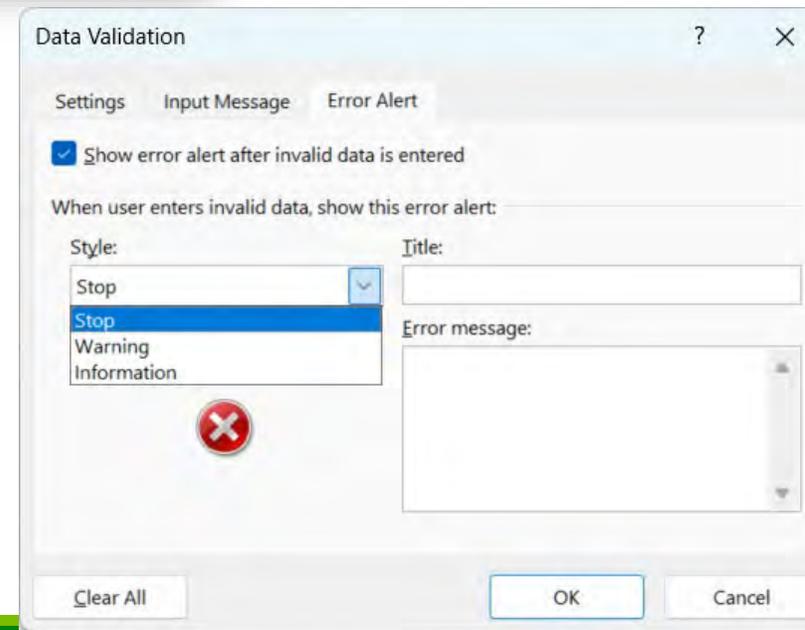
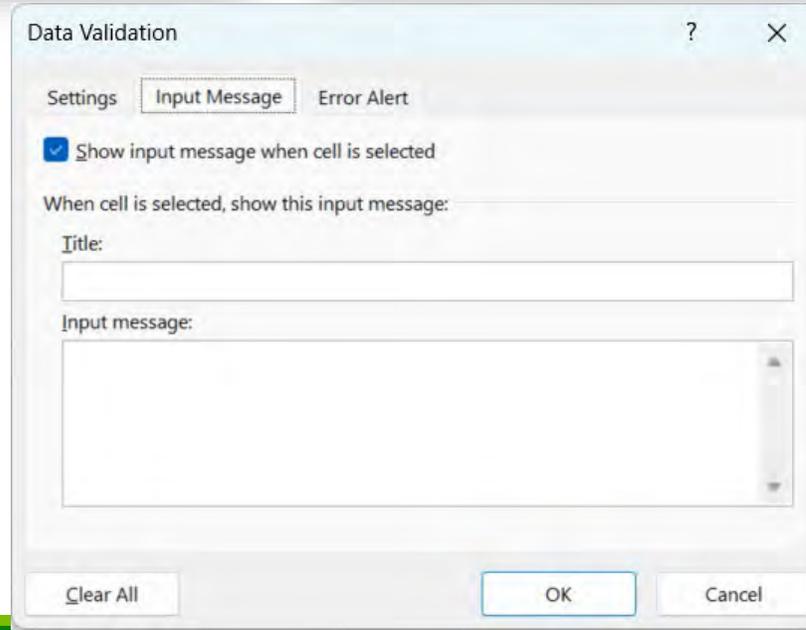
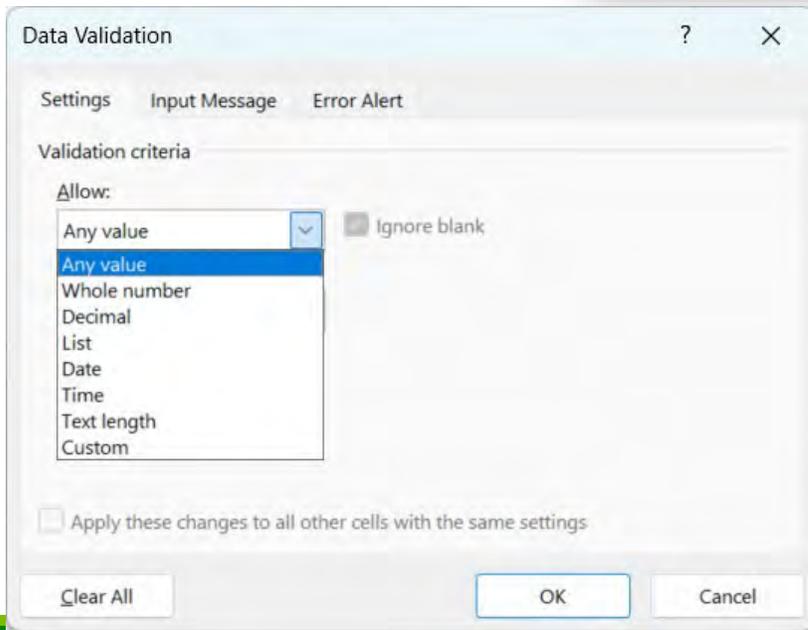
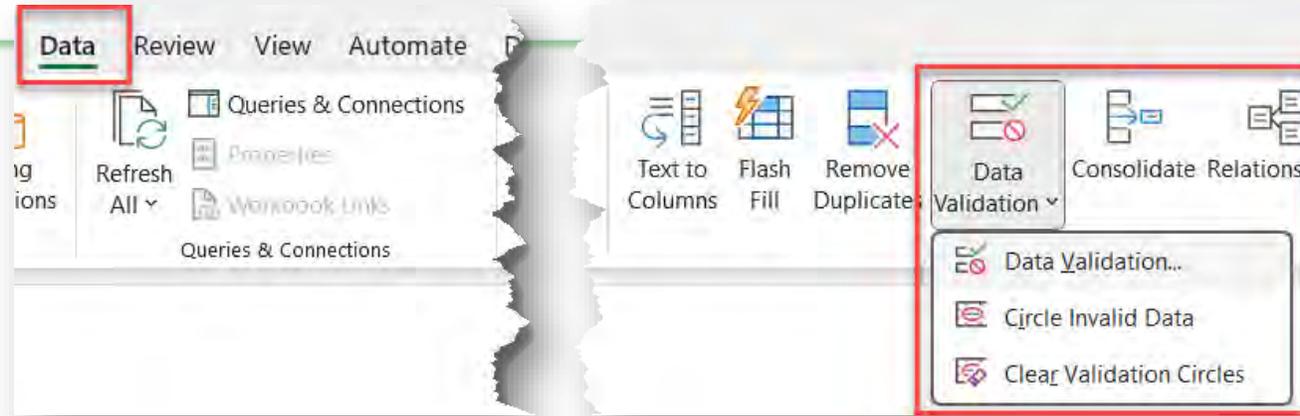
Prevent or warn users of invalid data

Provide messages to define what input you expect

Restrict data to:

- Predefined list
- Date/time range,
- Number range
- Text size
- Formula

Data Validation Dialog Box and Options



Settings - Validation Criteria

Requires "Range" with Min and Max

- Whole Number
- Decimal
- Date
- Time
- Text Length

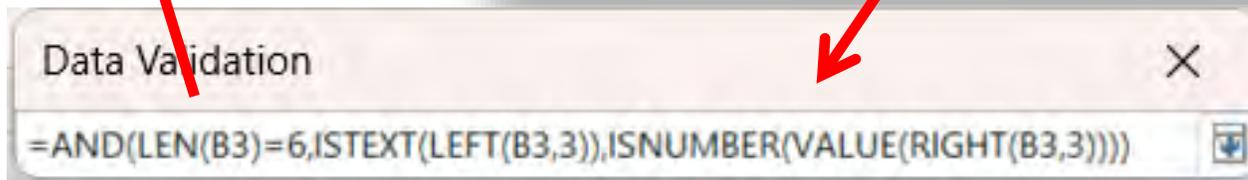
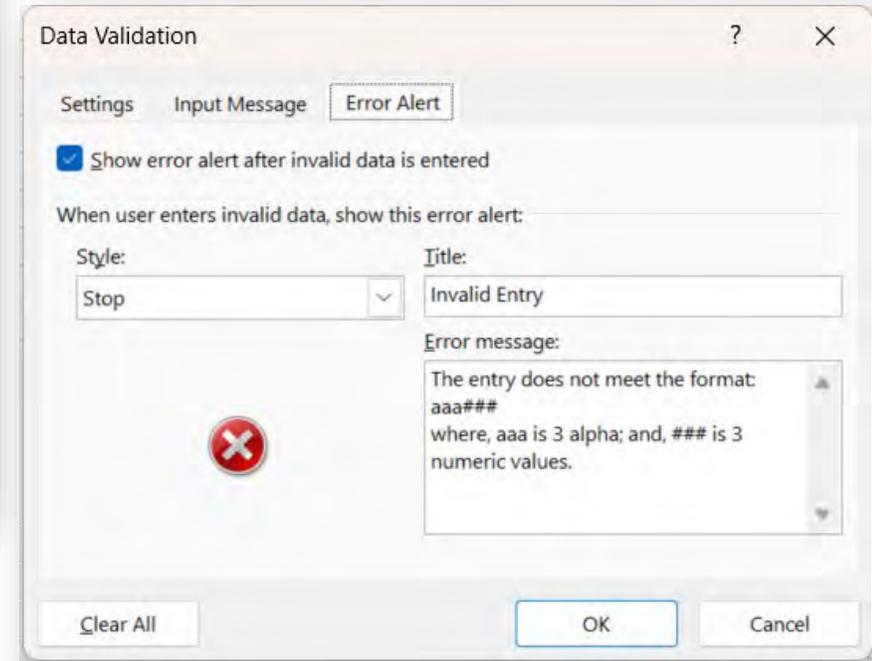
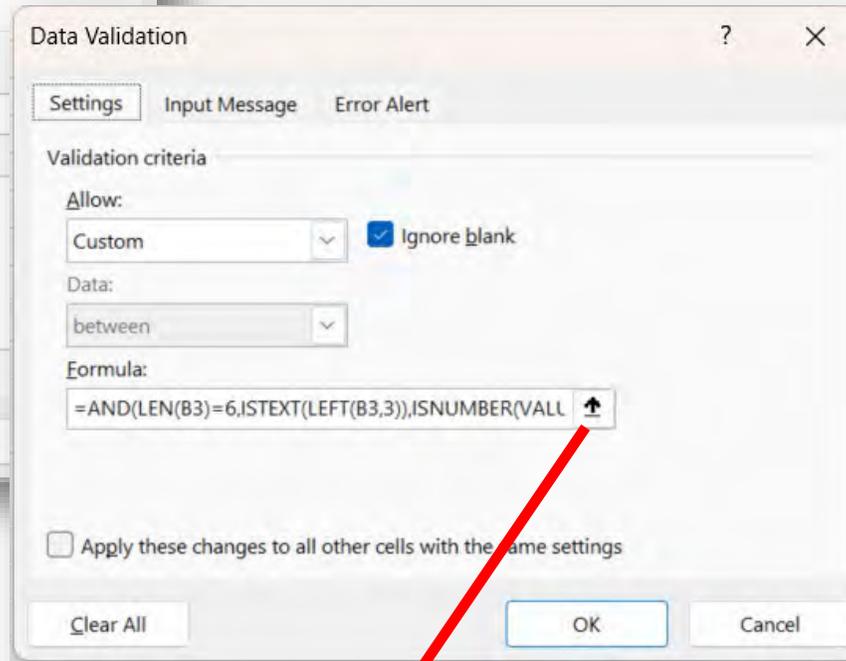
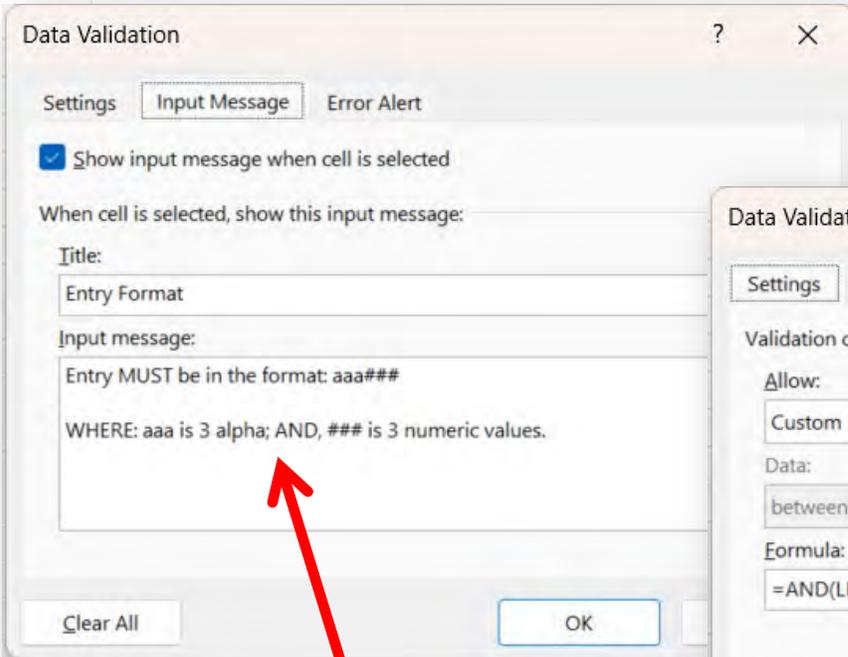
Requires a Source

- List

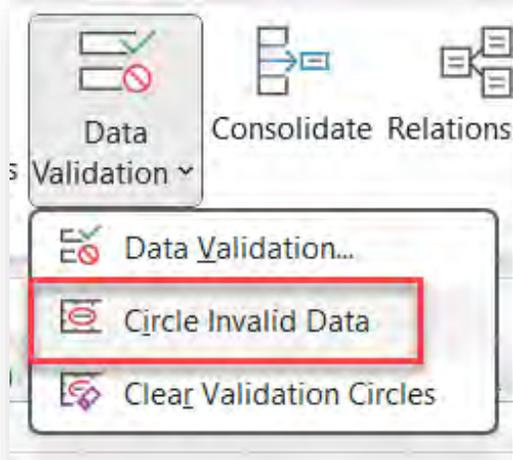
Requires a Formula

- Custom

Customer ID Example - Formula for Special Format



Circle Invalid Data



Warning & Information where you accepted invalid data

Paste, Fill, Formula or Macro where invalid data is in cell

	Enter Data:	Data Validation Requirements:
CustID:	abc	---> Special format
Name:	Jones, Smith, Brown, Willi	---> Limit # of characters
Continent:	North America	---> Drop-Down list of valid entries
Territory:	Canada	---> Lookup based on Territory

Data Validation - "After the Fact"

Highlight data, then select Data Validation

This represents "valid" data and will circle values "outside" the criteria

Data Validation

Settings Input Message Error Alert

Validation criteria

Allow: Whole number Ignore blank

Data: greater than

Minimum: 100

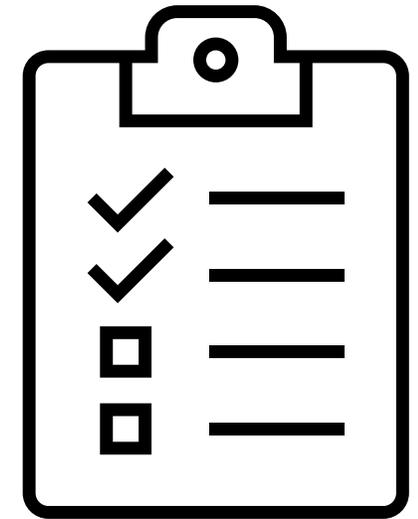
Apply these changes to all other cells with the same settings

Clear All OK Cancel

Now, select Circle Invalid Data

	Qty	U
	77	
	238	
	15	
	5	
lue	50	
	150	
	110	
.42	18	
.42	13	
	23	
.6	12	

Error Tracing and Auditing Tools



Excel Formula Auditing Tools

View and troubleshoot calculations

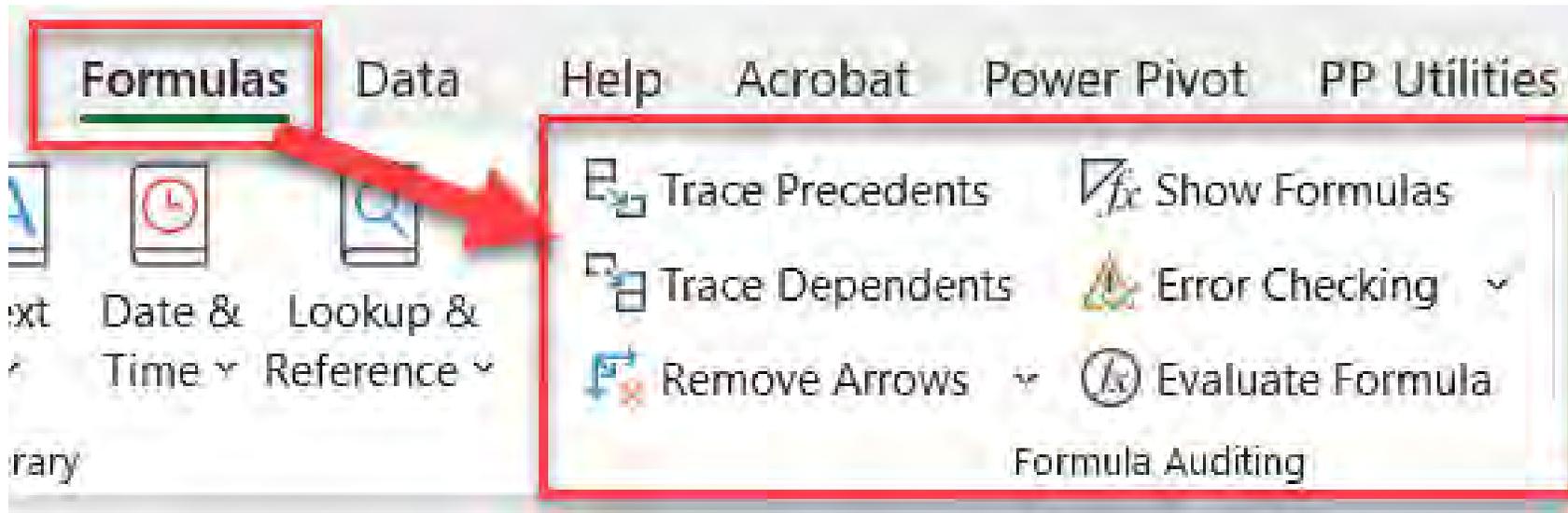
Determine if a cell is used in a formula

Display all formulas in cells

Move through errors based on Error Checking Rules

Step through each part of a complex formula

Formulas - Formula Auditing



Trace Precedents

Indicates cell(s) used in *formula* calculation

Product Name	Qty	Unit Price	Total
ML Mountain Tire	77	\$ 29.99	\$ 2,309.23
Patch Kit/8 Patches	238	\$ 2.29	\$ 545.02
Road Tire Tube	15	\$ 3.99	\$ 59.85
Road-250 Red, 48	5	\$ 2,443.35	\$ 12,216.75
Sport-100 Helmet	50	\$ 34.99	\$ 1,749.50

Select cell with formula, then select Trace Precedents

Double-click *line* to follow "on sheet" or "off sheet" connector

Trace Dependents

Indicates where cell is used in *formula* calculation

Product Name	Qty	Unit Price	Total
ML Mountain Tire	77	\$ 29.99	\$ 2,309.23
Patch Kit/8 Patches	238	\$ 2.29	\$ 545.02
Road Tire Tube	15	\$ 3.99	\$ 59.85
Road-250 Red, 48	5	\$ 2,443.35	\$ 12,216.75
Sport-100 Helmet	50	\$ 34.99	\$ 1,749.50

Select cell with formula, then select Trace Dependents

Double-click *line* to follow "on sheet" or "off sheet" connector

Formulas Used in Other Formulas

Multiple Trace Example	
Initial Value	\$ 1.00 <---- Start Here for Trace Dependents
Calc #1	\$ 10.00
Calc #2	\$ 10,000.00
Calc #3	\$ 10,600.00
Calc #4	\$ 5,300.00
Calc #5	Start Here for Trace Precedents ----> FALSE

Select cell with formula, then select Trace Precedents multiple times

Works best for "on sheet" formulas. For "off sheet" formulas, must double-click connector then select Trace Precedents

Show Formulas

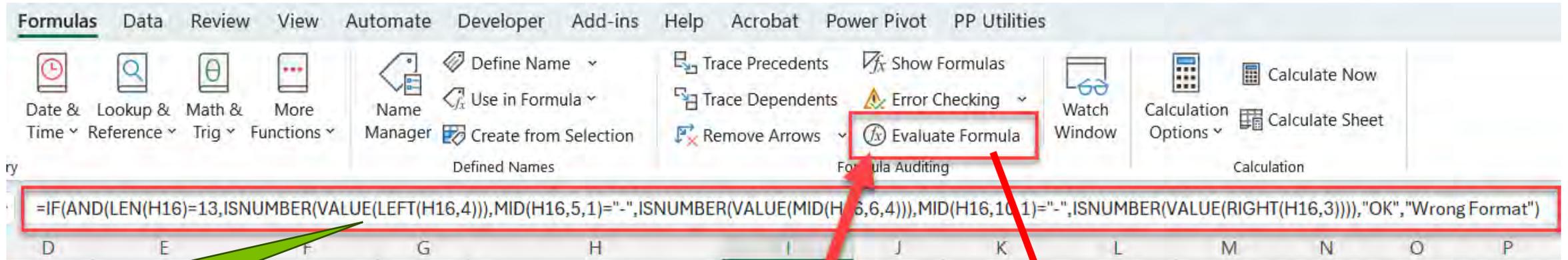
Displays the formulas in each cell of the Worksheet

	F	G	I	J
	Total	Multiple Trace Example		
	=ROUND([@Qty]*[@Unit Price],R	Initial Value	1	<---- Start Here for Tra
	=ROUND([@Qty]*[@Unit Price],R	Calc #1	=I2*10	
	=ROUND([@Qty]*[@Unit Price],R	Calc #2		=J4^4
	=ROUND([@Qty]*[@Unit Price],R	Calc #3		
	=ROUND([@Qty]*[@Unit Price],R	Calc #4		

May not display the entire formula, use caution changing column width as it will remember the new size

Select Show Formulas to revert to resulting values

Evaluate Formula



Works great on complex formula

Evaluate Formula

1234-1234-1234 Wrong Format

The 'Evaluate Formula' dialog box is open, showing the formula being evaluated: `= IF(AND(LEN(H16)=13,ISNUMBER(VALUE(LEFT(H16,4))),MID(H16,5,1)="-",ISNUMBER(VALUE(MID(H16,6,4))),MID(H16,10,1)="-",ISNUMBER(VALUE(RIGHT(H16,3)))),"OK","Wrong Format")`. The result of the evaluation is 'Wrong Format'. The dialog box also includes buttons for 'Evaluate', 'Step In', 'Step Out', and 'Close'.

Evaluate Formula - Step Through Calculation

Evaluate Formula

Reference: FormulaAuditing!\$I\$16

FormulaAuditing!\$H\$16

Evaluation: = IF(AND(LEN(H16)=13,ISNUMBER(VALUE(LEFT(H16,4))),MID(H16,5,1)="-",ISNUMBER(VALUE(MID(H16,6,4))),MID(H16,10,1)="-",ISNUMBER(VALUE(RIGHT(H16,3))))),"OK","Wrong Format")

1234-1234-1234

The cell currently being evaluated contains a constant.

Evaluate

Evaluate Formula

Reference: FormulaAuditing!\$I\$16

Evaluation: = IF(AND(LEN("1234-1234-1234")=13,ISNUMBER(VALUE(LEFT(H16,4))),MID(H16,5,1)="-",ISNUMBER(VALUE(MID(H16,6,4))),MID(H16,10,1)="-",ISNUMBER(VALUE(RIGHT(H16,3))))),"OK","Wrong Format")

To show the result of the underlined expression, click Evaluate. The most recent result appears italicized.

Step In Step Out Close

Evaluate Formula

Reference: FormulaAuditing!\$I\$16

Evaluation: = IF(AND(14=13,ISNUMBER(VALUE(LEFT(H16,4))),MID(H16,5,1)="-",ISNUMBER(VALUE(MID(H16,6,4))),MID(H16,10,1)="-",ISNUMBER(VALUE(RIGHT(H16,3))))),"OK","Wrong Format")

To show the result of the underlined expression, click Evaluate. The most recent result appears italicized.

Evaluate Step In Step Out Close

Wrap-Up



Presentation Wrap-Up

1 of 2

Research shows 80%+ of spreadsheets have errors

There are various ways to deal with formula errors that result in #errors

- Use formula to check for errors
- Use Find & Search - Go To Special
- Use Find - Find All
- Use Formula Auditing - Error Checking
- Create a Visual Basic Macro that finds and highlights

Presentation Wrap-Up

2 of 2

IF and IS functions help detect errors in formulas

- These can be used to mask errors
- Focus on using these to find errors

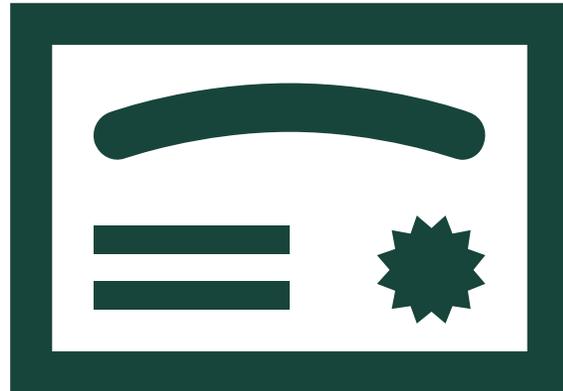
Data Validation can reduce input errors

- Can also be used to “test” cells “after the fact”

Excel Formula Auditing Tools can be used to view and troubleshoot calculations

Questions?





Thank You!!



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ONE FINAL NOTE

Microsoft 365: Supercharging CPA Productivity



Presented By

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Nationally recognized thought leader, advisor, author and speaker on CPA technology

Strategic technology advisor to the profession w/ 35+ years of experience

Founded and sold two CPA technology advisory startups

Former National Mid-market Technology Partner - BDO

CPA Practice advisor Top 25 Thought Leader for the CPA profession

AICPA Business & Industry Hall of Fame Inductee

Past Chair of the Michigan Association of CPAs

Passionate advocate for the CPA profession!

Learning Goals



- Identify many ways that you can tap into the full potential of Microsoft 365.
- Identify a series of specific initiatives and apps that you can implement to optimize Your Microsoft 365 ROI.

Presentation Outline

- Microsoft 365 Value Proposition
- Top Apps and Initiatives to Focus On
- Getting Help
- Wrap-up

MICROSOFT 365 VALUE PROPOSITION FOR YOUR PRACTICE



Microsoft 365 Value Proposition is Compelling

Enhance Communication & Collaboration

Simplify tech stack

Enhance data security and disaster recovery protection

Enable a hybrid work environment

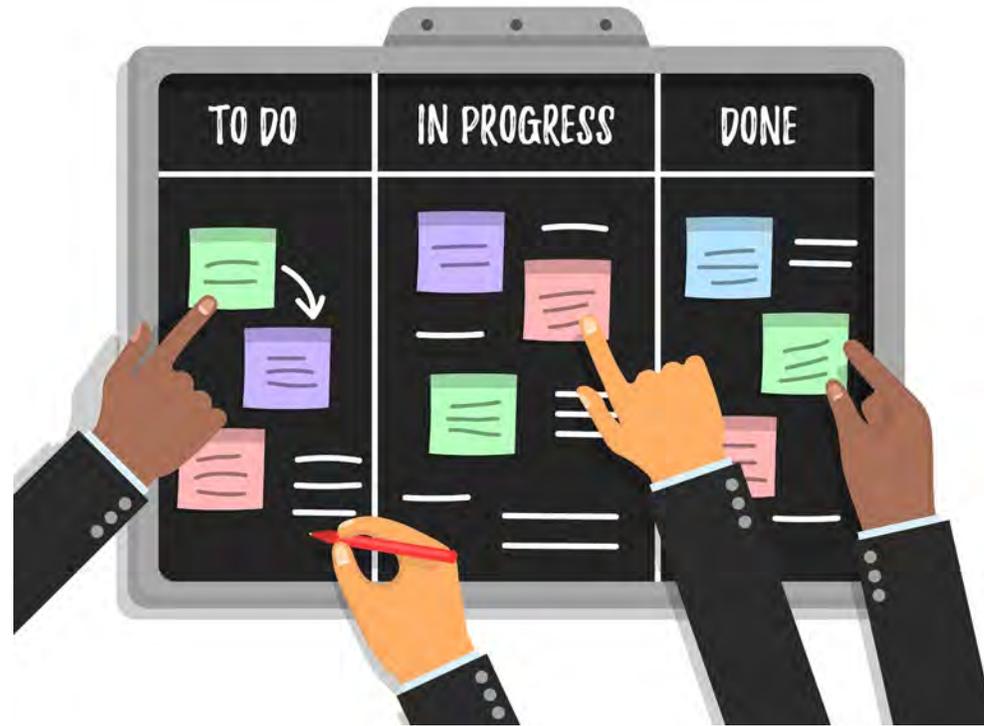
Future proof your business - create the foundation for using AI

Reduce costs & infinitely scalable

Microsoft 365 – What You Start With

 Add-Ins Add-Ins	 Bookings Simplify how you schedule and manage appointments both inside and outside your organization.	 Calendar Manage and share your schedule.	 Clipchamp Make and edit videos.	 Connections Access personalized tools, news, and resources.
 Engage Connect with coworkers and classmates, share information, and organize around projects.	 Excel Budget, plan, and calculate.	 Forms Customize surveys and quizzes, get real-time results.	 Insights Improve your productivity and wellbeing with Microsoft Viva Insights.	 Kaizala A simple and secure mobile chat app for work.
 Learning Keep learning, keep growing with Viva Learning.	 Lists Allows users to create, share, and track data inside lists.	 Loop Enabling teams to think, plan, and create together.	 OneDrive Safely store files, photos, and more.	 OneNote Create a digital notebook.
 Outlook Email, schedule, and set tasks.	 People Group, share, and manage contacts.	 Planner Create plans, organize and assign tasks, share files, and get progress updates.	 Power Apps Build mobile and web apps with the data your organization already uses.	 Power Automate Sync files and more to simplify your work.
 Power Pages Unleash the power of Copilot to craft secure, low-code business websites with ease.	 PowerPoint Easily make presentations.	 Project Develop project plans, assign tasks, track progress, and manage budgets.	 SharePoint Share and manage content, knowledge, and applications to empower teamwork.	 Stream Share videos of classes, meetings, presentations, and training sessions.
 Sway Create interactive reports and presentations.	 Teams Meet, share, and chat.	 To Do List and manage your tasks.	 Visio Simplify and communicate complex information visually.	 Viva Explore Viva apps that improve the way you work.
 Whiteboard Ideate and collaborate on a freeform canvas designed for pen, touch and keyboard.	 Word Write, share, and make real time edits.			

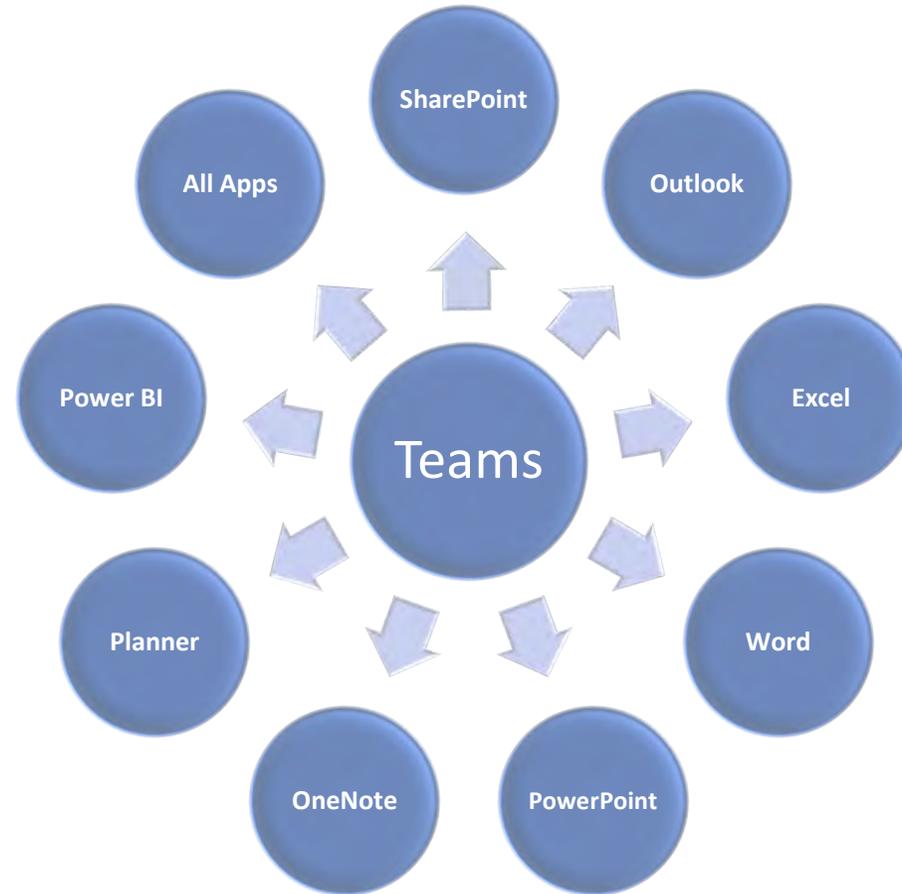
TOP MICROSOFT 365 INITIATIVES AND APPS TO FOCUS ON



Tips for Getting The Most Out of M365

- Make Teams the priority (including online meetings)
- Store shared files in SharePoint (including client file uploads)
- Manage engagements with Planner
- Get organized with OneNote
- Manage lists with Lists app
- Document processes with Clipchamp (formerly Stream)
- Create forms and surveys with Forms app
- Manage your schedule with the Bookings app
- Communicate financial data visually with Power BI
- Automate workflows with Power Automate & Copilot Studio

TEAMS ROLE IN THE MICROSOFT 365 ECOSYSTEM

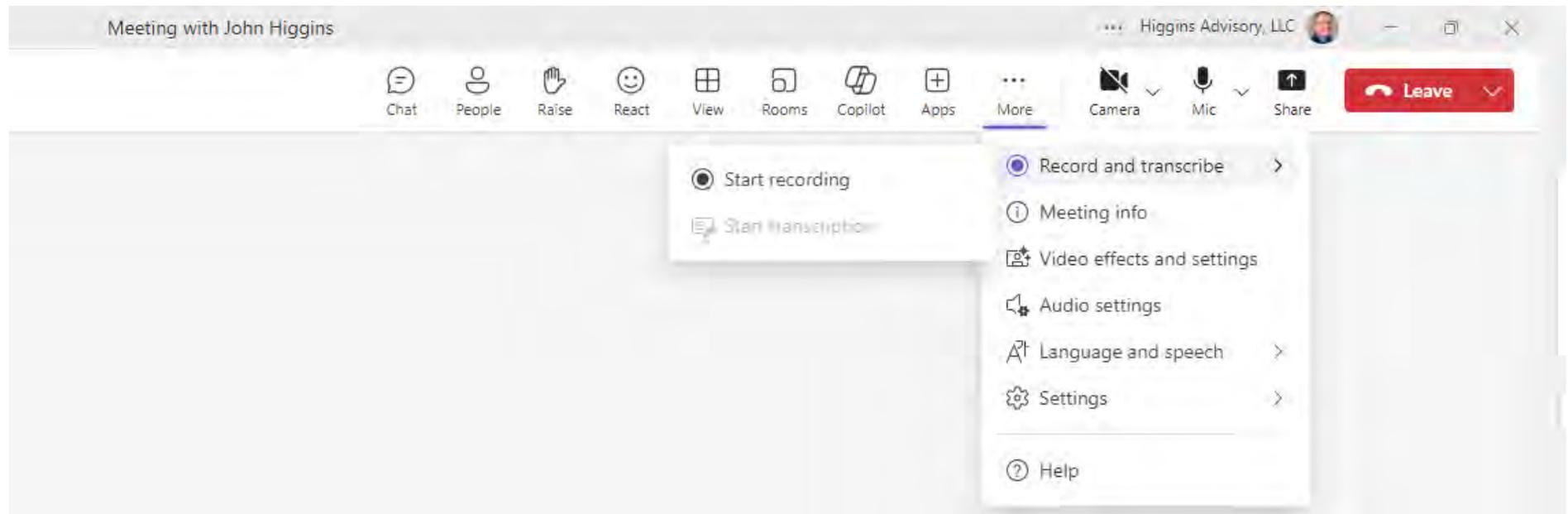
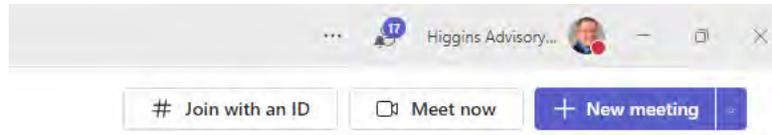


Communication - Make Teams the Priority

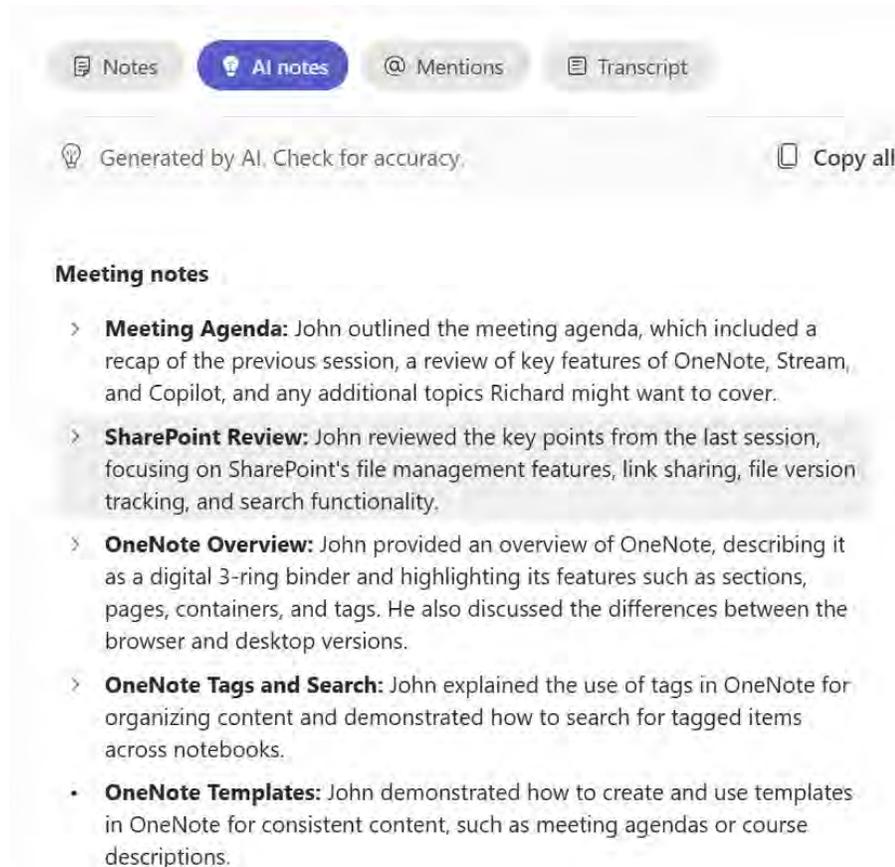


- ✓ Plan your Teams / Channels setup
- ✓ Use Chat within Team Channels
- ✓ Use Channel tabs for maximum efficiency
- ✓ Replace your phone system with Teams and Microsoft Voice
- ✓ Transfer email conversations to Teams
- ✓ Conduct and record all meetings in Teams

Document Meetings With Teams



Recap Teams Meetings Example



The screenshot shows the Microsoft Teams interface for AI-generated notes. At the top, there are tabs for 'Notes', 'AI notes' (which is selected), 'Mentions', and 'Transcript'. Below the tabs, there is a notification that says 'Generated by AI. Check for accuracy.' with a 'Copy all' button. The main content area is titled 'Meeting notes' and contains a list of five items:

- › **Meeting Agenda:** John outlined the meeting agenda, which included a recap of the previous session, a review of key features of OneNote, Stream, and Copilot, and any additional topics Richard might want to cover.
- › **SharePoint Review:** John reviewed the key points from the last session, focusing on SharePoint's file management features, link sharing, file version tracking, and search functionality.
- › **OneNote Overview:** John provided an overview of OneNote, describing it as a digital 3-ring binder and highlighting its features such as sections, pages, containers, and tags. He also discussed the differences between the browser and desktop versions.
- › **OneNote Tags and Search:** John explained the use of tags in OneNote for organizing content and demonstrated how to search for tagged items across notebooks.
- **OneNote Templates:** John demonstrated how to create and use templates in OneNote for consistent content, such as meeting agendas or course descriptions.

Follow-up tasks

- **Copilot Feature:** Post information in the Teams channel about the current status and functionality of the bookmark feature in Teams. (John)
- **Copilot Feature:** Check and confirm the availability of the bookmark feature in Teams and update the team accordingly. (John)
- **Copilot Access:** Ensure that the Copilot button is enabled for all team members in the Edge browser and provide necessary instructions for access. (Richard)
- **Copilot Training:** Offer training sessions or resources for team members interested in learning more about Copilot for Office 365 and its applications. (Richard)
- **Power BI Training:** Identify a team member to become the expert in Power BI and provide them with necessary training resources. (Lisa)

Recap Teams Meetings Example (continued)

Did we review the Planner app in the meeting

Copilot 3/22 1:28 PM

The Planner app was mentioned briefly in the context of tasks and to-do lists. It was noted that tasks assigned in the Planner app would show up in the To Do app, allowing for centralized task management across different 365 applications. However, there was no detailed review or demonstration of the Planner app itself. 1

AI-generated content may be incorrect

Does it seem like the attendees were understanding the concepts presented

Copilot 3/22 1:29 PM

Based on the meeting transcript, attendees engaged actively with the concepts presented, asking relevant questions and providing feedback. For example, Richard and Lisa discussed the possibility of flagging discussion threads in Teams, and Mary Rae MacKay shared a screenshot to assist with understanding a feature. Additionally, Richard offered to help anyone interested in learning more about Copilot for Office 365, indicating a proactive approach to understanding and utilizing the tools discussed. 1 2 3

AI-generated content may be incorrect

Did I discuss OneDrive security

Copilot 3/22 5:14 PM

Yes, OneDrive security was discussed briefly. John mentioned that OneDrive stores files that only the user has access to unless they share specific files or folders with others. This ensures privacy and control over the stored content. 1 2

AI-generated content may be incorrect

Ask me anything about this meeting

More prompts

Storing and Sharing Files



Store Shared Files in SharePoint & Personal Work Files in OneDrive

OneDrive = your personal (business) files

SharePoint = shared file sites

Share files internally & externally

Simultaneous Office file editing

Eliminate email file attachments

Synchronize with local PC

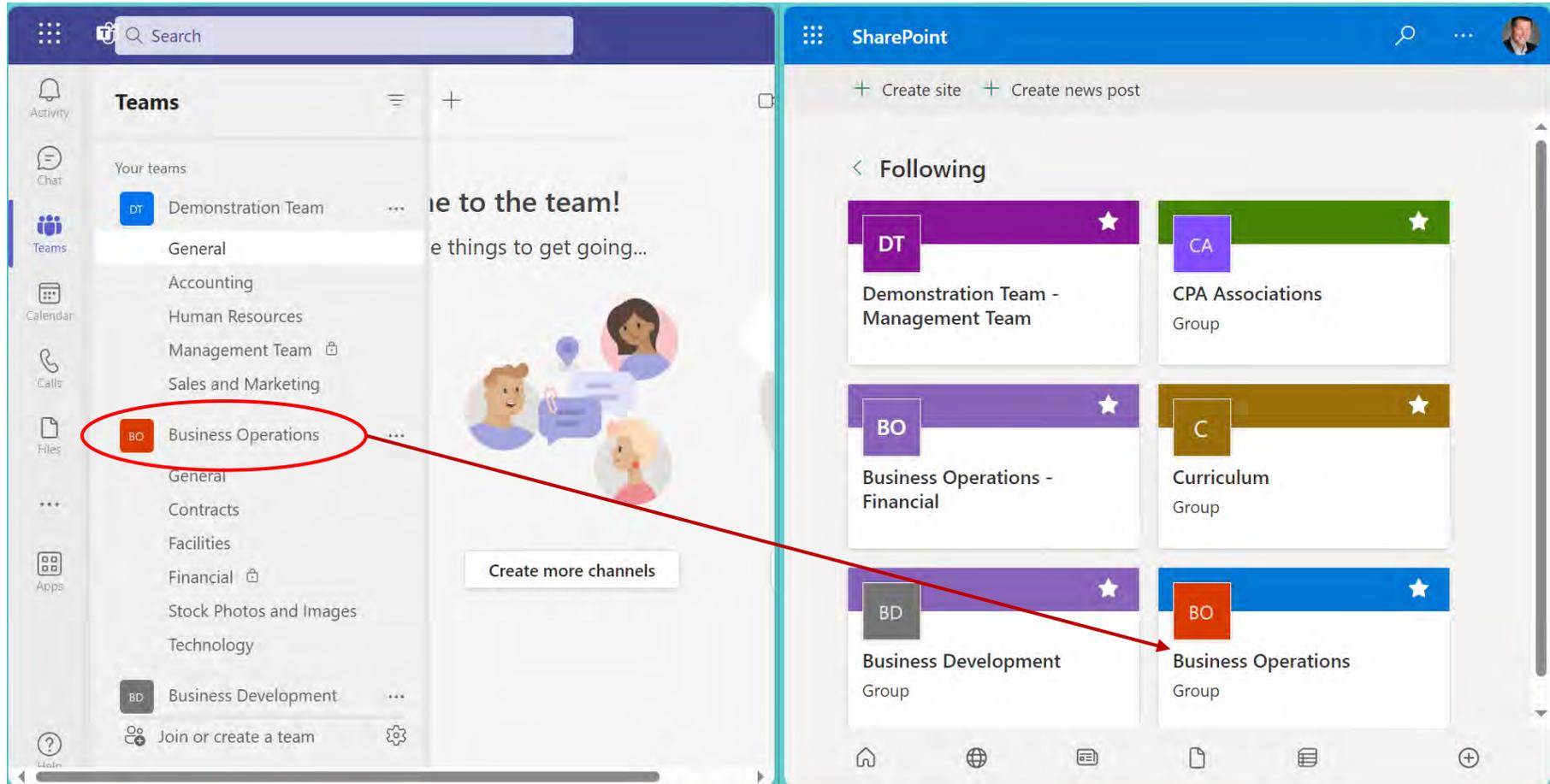
Maintain file version history

Set custom alerts

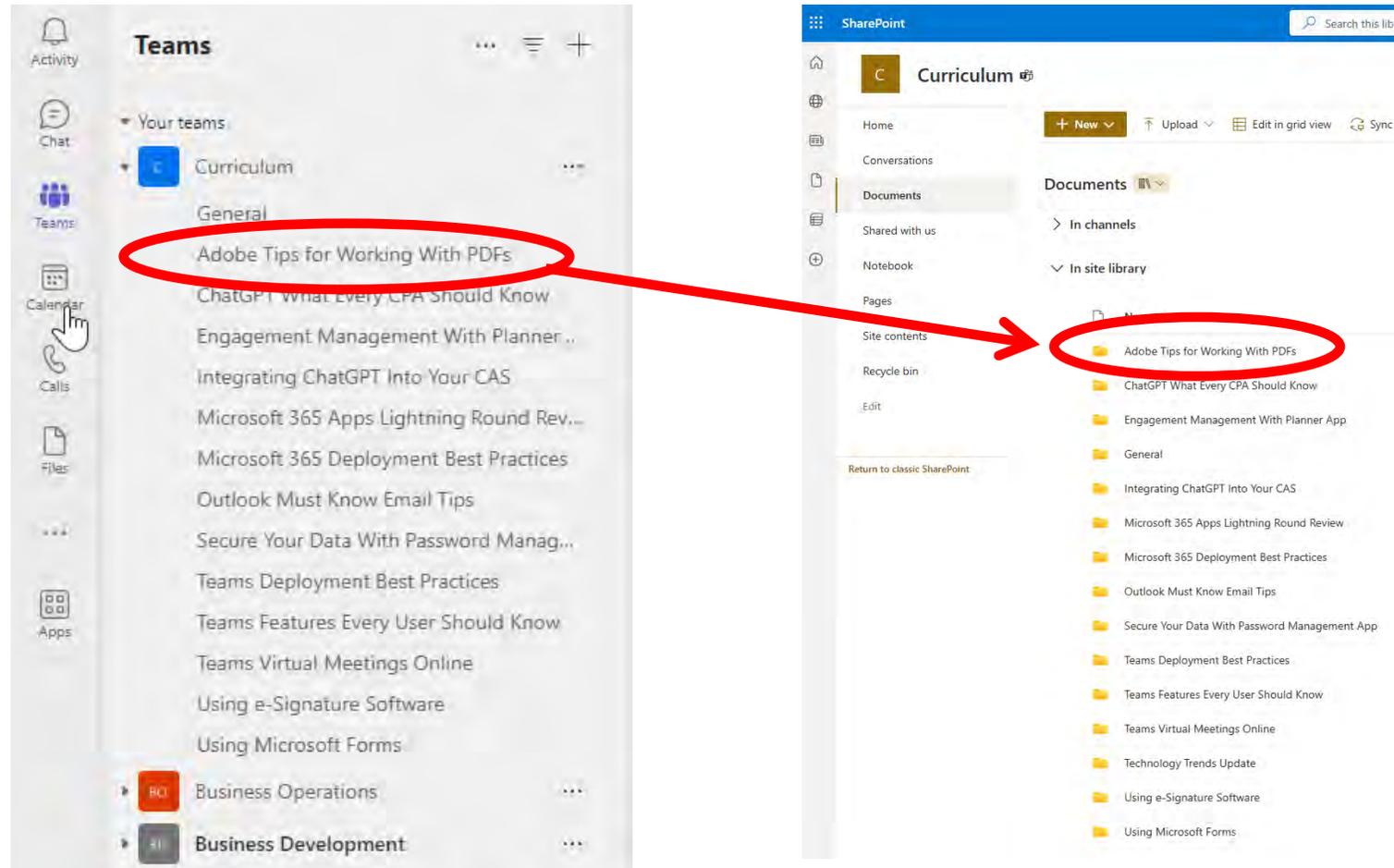
SharePoint Best Practices

- Manage SharePoint site creation and folder management through Teams
- Learn how file versioning works and manage appropriately
- Minimize the use of OneDrive
- Use Teams & SharePoint as a client portal for communication and file exchange
- Share files via email links, not attachments
- Automate routine file processing with Power Automate and Copilot

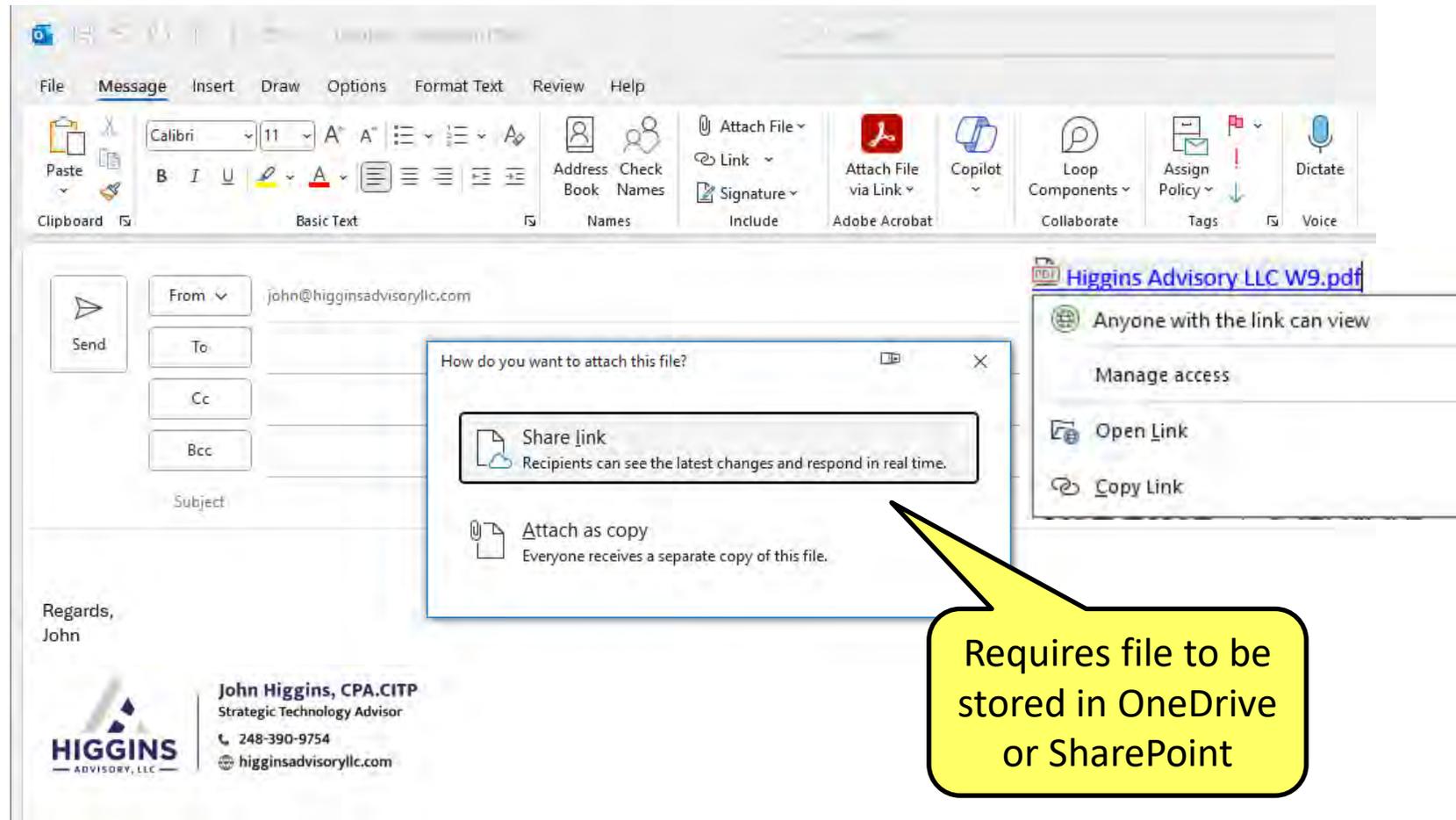
Teams / SharePoint Relationship



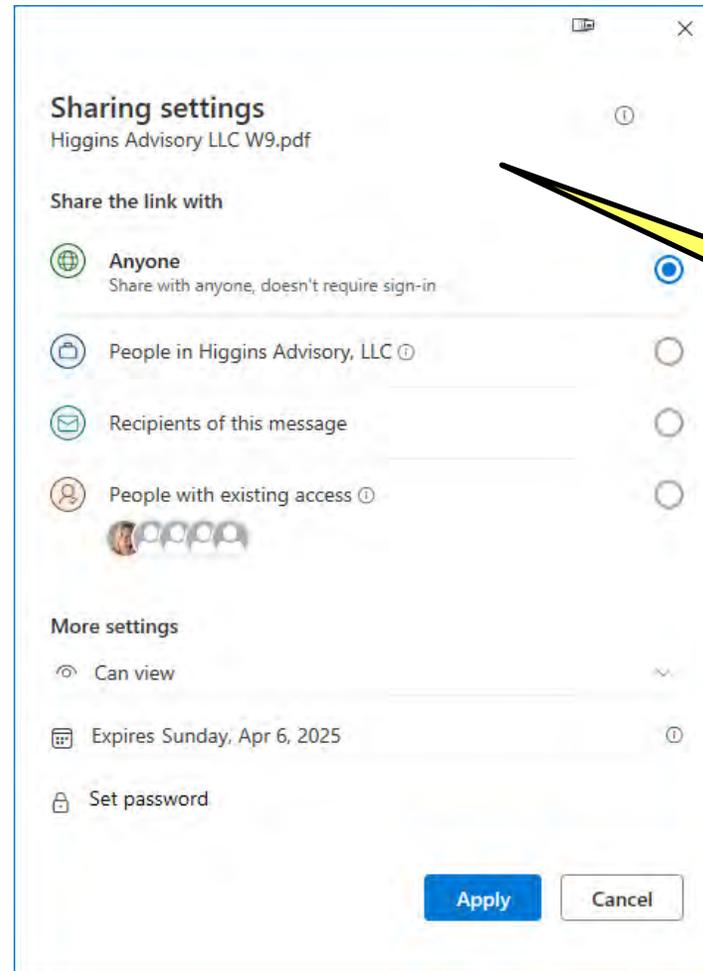
Teams Channels & SharePoint File Folders



Sending Files Securely: Use File Link



Establish File Link Access Controls



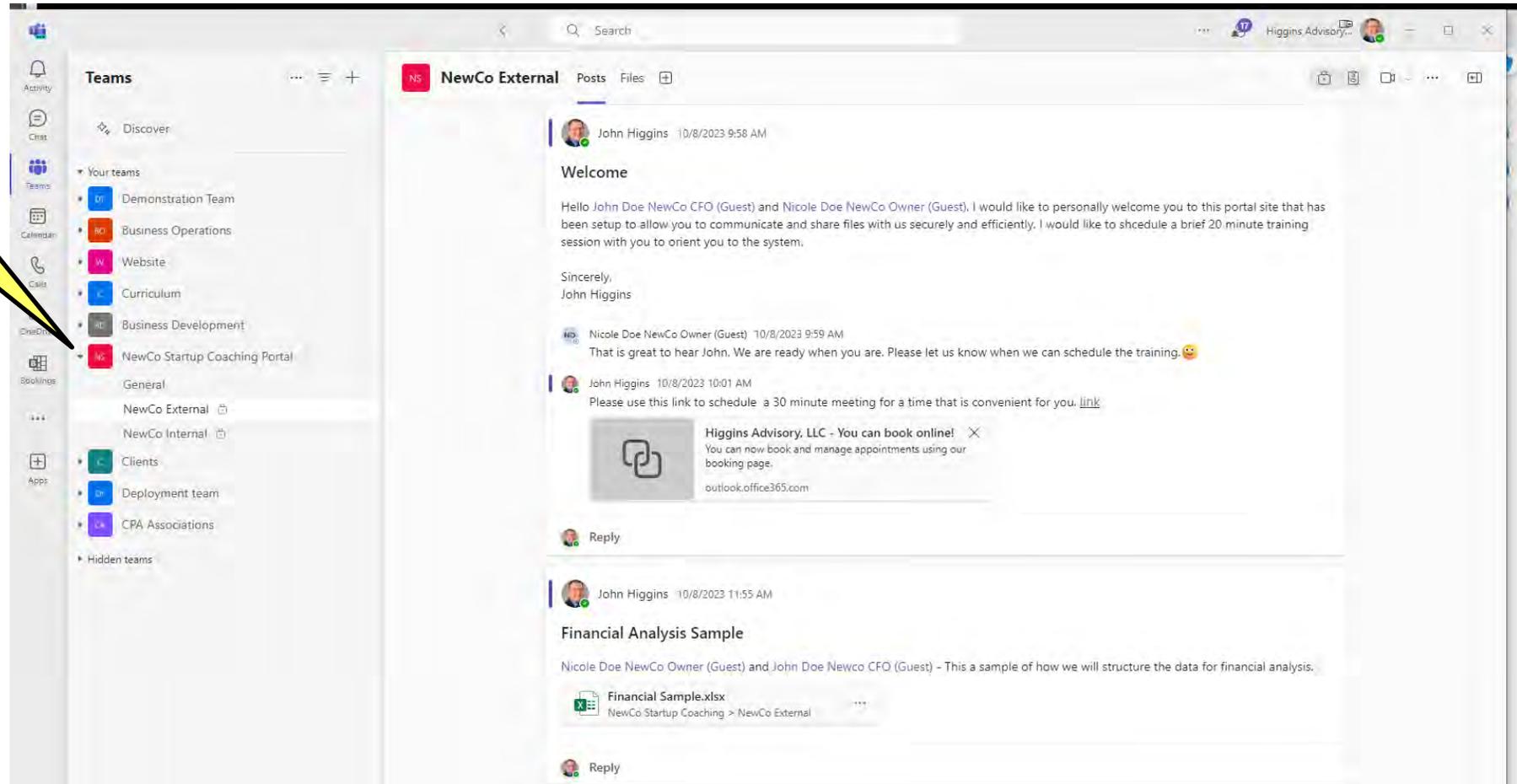
Establish file sharing link permissions

Create a Secure Client Portal Using Teams

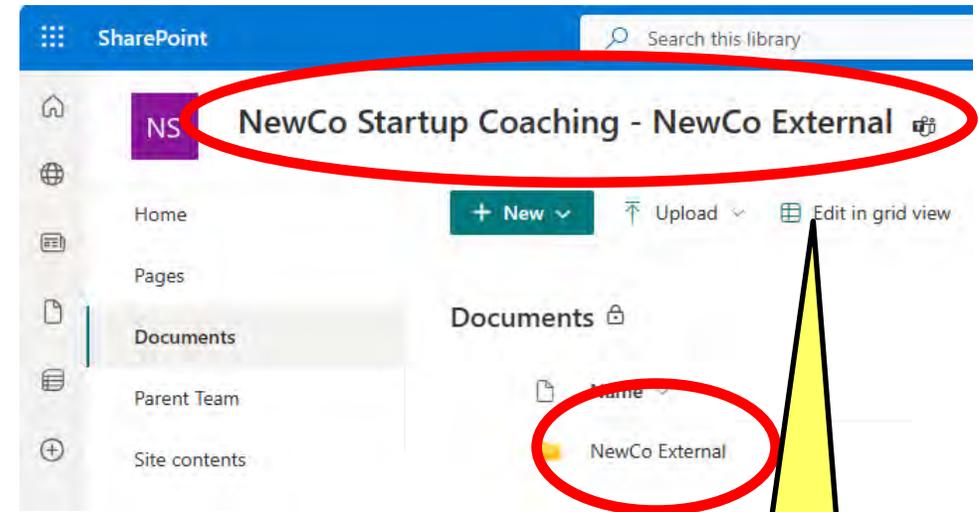
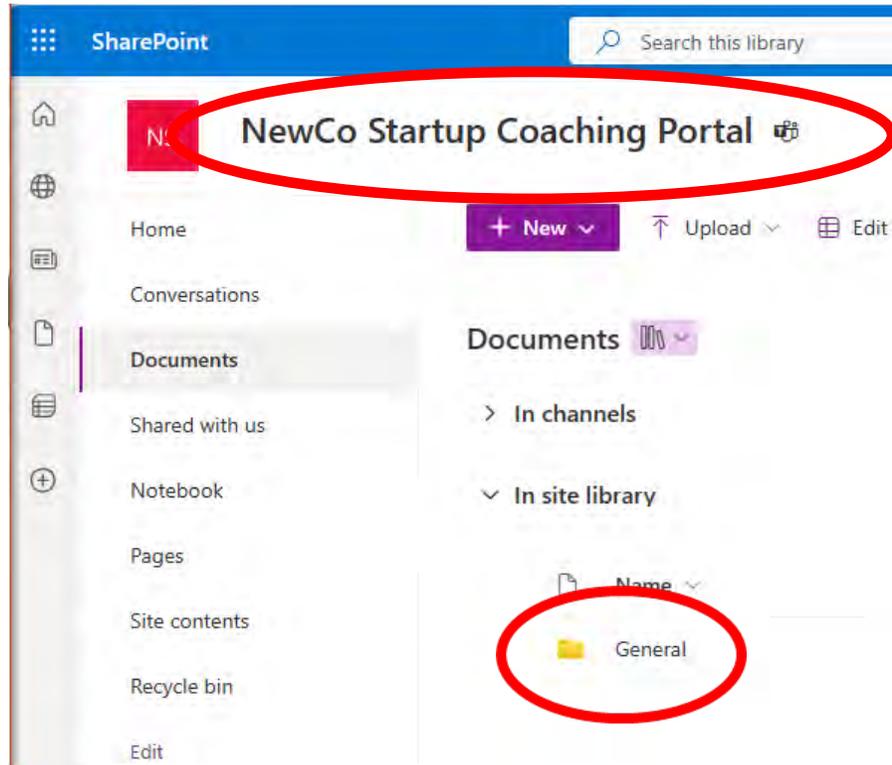


Establish Client Portal Model (continued)

Firm view

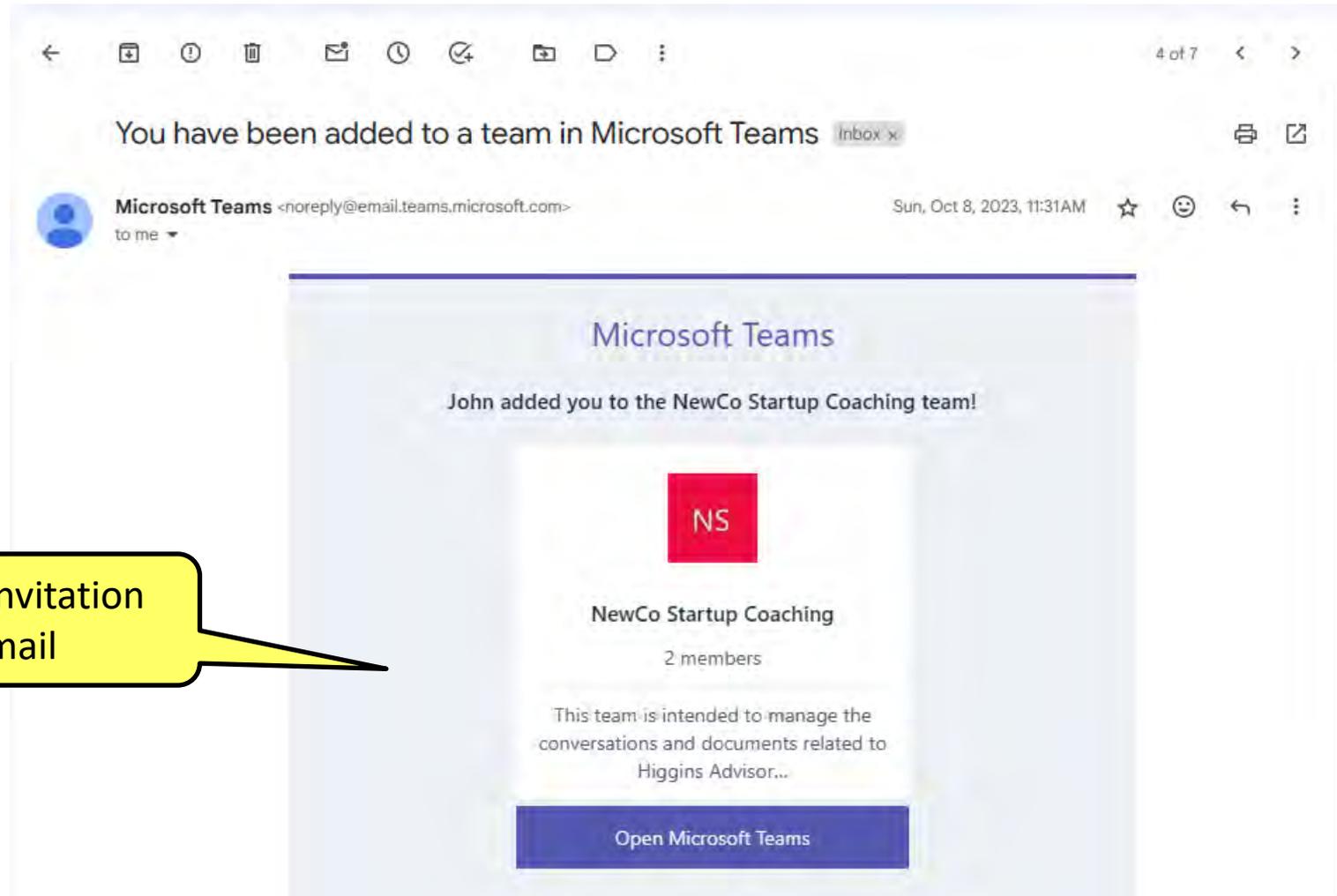


Establish Client Portal Model (continued)



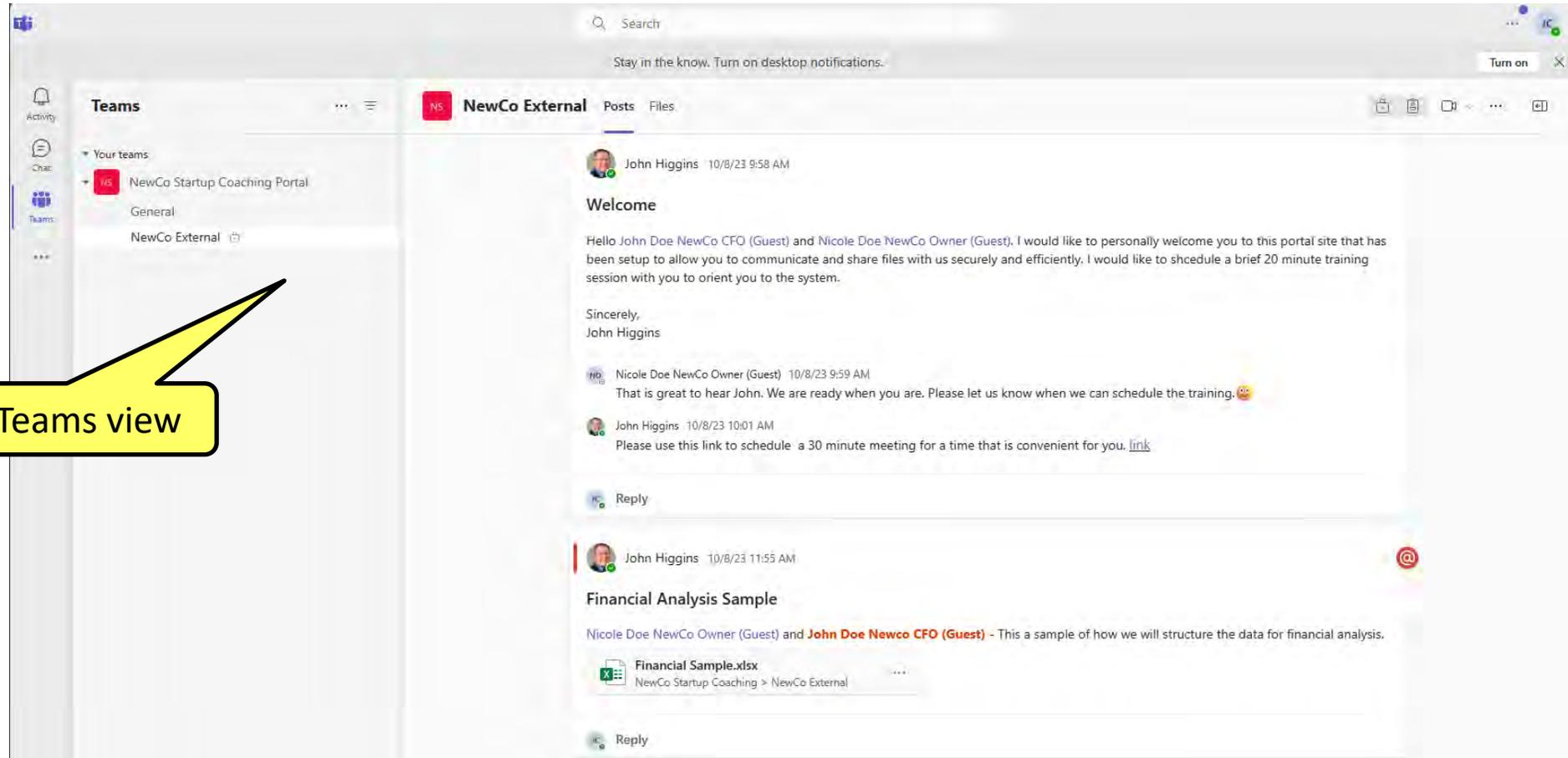
Private channel site

Establish Client Portal Model (continued)



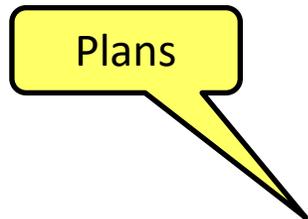
Client invitation email

Establish Client Portal Model (continued)



Client Teams view

Manage Engagements & Projects with Planner



Planner

My Plans > MS Teams Deployment

Grid Board Schedule Charts Timeline

My Day
My Tasks
My Plans

Pinned

- Tax Engagement Demonstrat...
Demonstration Team
- Courseware Development
Courseware Development
- MMO
MMO

+ New plan

Set up this planner

- + Add task
- Project management
- Project kickoff
You've read the introduction to this "Chat, teams, channels, and apps" plan. You've done all the preliminary tasks. Now you're ready to hold a kickoff meeting for your Teams rollout project. The project...
- 0 / 5
12/31/2024

Get ready

- + Add task
- Adoption
- Build your Teams adoption plan
A successful Teams rollout needs a well-thought-out adoption plan to help your users make the move to Teams and get the most out of it, right from the start. Use our adoption guidance to create a pla...
- 3 0 / 5
12/31/2024

Roll out to early adopters

- + Add task
- Project management Adoption
- Implement your adoption plan
You created an adoption plan under "Get ready." Now it's time to implement it. If you need further guidance, check out c "Adopt Teams" resources in the attachm below.
- 1 0 / 1
02/28

Configuration

- Address deployment prerequisites
Before you roll out Teams across your organization, take time to confirm that your environment is ready for Teams. If you used "Get started" to get out...

Project management Configuration

- Roll out Teams to pilot users
To get started quickly on Teams, we recommend you create two or three team and channels for a select group of early adopters. Be sure to roll out Teams...

Task Card Details

Task Details

Task Detailed Description / Notes

Task Checklist Items

Task Description / Name

Assigned to

Task classification labels

- Copy task
- Move task
- Copy link to task
- Delete

File attachments / links

Comments / activity journal

The screenshot shows a task card for "MS Teams Deployment" with the title "Implement your adoption plan". It includes an "Assign" button, classification labels "Project management" and "Adoption", and fields for "Bucket" (Roll out to early adopters), "Progress" (Not started), and "Priority" (Medium). It also has fields for "Start date", "Due date" (01/29/2024), and "Repeat" (Does not repeat). The "Notes" section contains text about creating an adoption plan. Below the notes is a "Checklist 0 / 1" with one item: "Implement the adoption plan you created under Get ready". The "Attachments" section shows a link to "1. Adopt Microsoft Teams" with a URL. At the bottom, there is a "Comments" section with a text input field.

ORIENTATION TO THE PLANNER APP



Planner App Home Screen

The screenshot shows the Microsoft Planner app interface. On the left, a navigation pane includes 'My Day', 'My Tasks', 'My Plans' (highlighted with a red circle), and 'Pinned' items like 'Tax Engagement Demonstrat...', 'Courseware Development', and 'MMO'. A yellow speech bubble labeled 'Plans' points to the 'My Plans' icon. The main area displays a 'Board' view for 'MS Teams Deployment' with three columns: 'Set up this planner', 'Get ready', and 'Roll out to early adopters'. Each column contains task cards with details, progress indicators, and due dates.

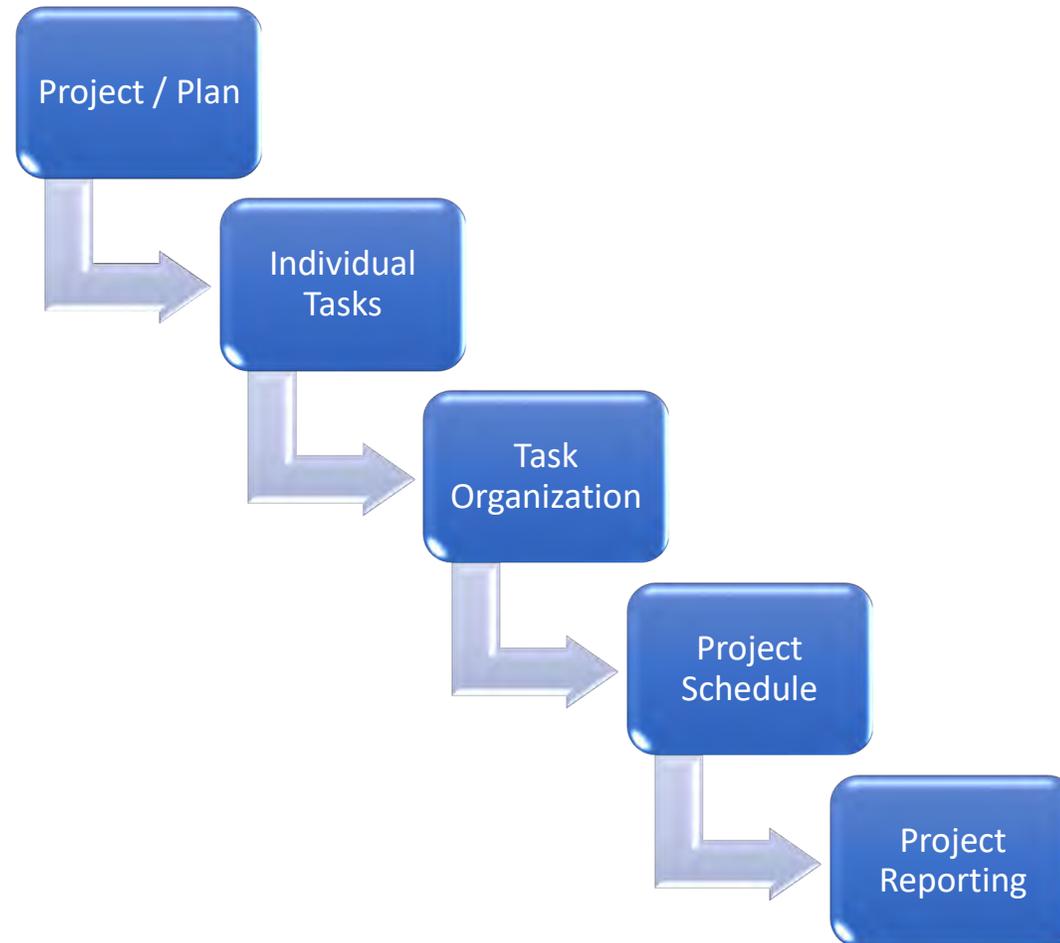
Project Plan Board View

The screenshot displays the Microsoft Planner interface in Board View for a project named "MS Teams Deployment". The top navigation bar includes "View Board" and various view options: "Grid", "Board" (circled in red), "Schedule", "Charts", and "Timeline". The main workspace is divided into four columns representing different project phases:

- Set up this planner:** Contains a task "Project kickoff" under the "Project management" bucket. Progress: 0 / 6. Due date: 12/31.
- Get ready:** Contains a task "Build your Teams adoption plan" under the "Adoption" bucket. Progress: 0 / 5. Due date: 12/31.
- Roll out to early adopters:** Contains a task "Implement your adoption plan" under the "Project management" and "Adoption" buckets. Progress: 0 / 1. Due date: 03/28.
- Org-wide rollout:** Contains a task "Update your adoption plan" under the "Adoption" bucket. Progress: 0 / 1. Due date: 03/11.

Annotations include a red circle around the "Board" view selector and a yellow callout box pointing to the "Roll out to early adopters" column with the text "Organizing Buckets". Another yellow callout box points to the task "Build your Teams adoption plan" with the text "Individual Tasks".

DEEP DIVE FEATURES REVIEW



Creating A Plan

The image illustrates the process of creating a plan in a software application. It is divided into three main sections:

- Left Panel:** A sidebar menu with a red circle around the 'Plan' option. Below it are 'Portfolio' and a 'New plan' button.
- Middle Panel:** A 'Create new' dialog box. A red circle highlights the 'Basic' template (labeled 'Start with grid and board'). A red arrow points from this circle to the right panel.
- Right Panel:** A 'Create a basic plan from scratch' dialog box. It shows a 'Name' field with 'Audit Engagement Demo - Standard', a checked 'Add to my pinned plans' checkbox, and a group selection dropdown. The dropdown is open, showing a search bar and a list of groups: 'Business Operations Private', 'Business Development Private', 'Curriculum Private', 'CPA Associations Private', and 'Demonstration Team Private'. A yellow callout box points to the 'Demonstration Team' group with the text: 'All team members will have access to the plan'.

Individual Task Card Details

Task Description / Name

Task classification labels

Assigned to

Setup recurring tasks

Task Details

Task Detailed Description / Notes

Task Checklist Items

File attachments / links

Comments / activity journal

The screenshot displays a task card for 'MS Teams Deployment' with the title 'Implement your adoption plan'. The card includes several sections: 'Assigned to' (empty), 'Task classification labels' (Project management, Adoption), 'Bucket' (Roll out to early adopters), 'Progress' (Not started), 'Priority' (Medium), 'Start date' (Start anytime), 'Due date' (01/29/2024), and 'Repeat' (Does not repeat). The 'Notes' section contains text about creating an adoption plan. Below the notes is a 'Checklist 0 / 1' with one item: 'Implement the adoption plan you created under Get ready'. The 'Attachments' section shows a link to '1. Adopt Microsoft Teams' with a URL. The 'Comments' section is at the bottom with a text input field.

Board View

The screenshot shows the Microsoft Planner interface in 'Board View' for a plan titled 'MS Teams Deployment'. The interface is organized into five columns representing different stages of the project:

- Set up this planner:** Contains one task, 'Project kickoff', under the 'Project management' category. It includes a description, progress indicators (0/6), and a due date of 12/31.
- Get ready:** Contains two tasks. The first is 'Identify Teams champions and early adopters' (Adoption category) with progress 2/4 and due date 12/31. The second is 'Address deployment prerequisites' (Configuration category) with progress 0/8 and due date 12/31.
- Roll out to early adopters:** Contains two tasks. The first is 'Implement your adoption plan' (Adoption category) with progress 0/1, due date 03/28, and a description about creating an adoption plan. The second is 'Roll out Teams to pilot users' (Configuration category) with progress 0/4, due date 03/28, and a description about creating pilot teams.
- Org-wide rollout:** Contains two tasks. The first is 'Update your adoption plan as needed' (Adoption category) with progress 0/1, due date 03/11, and a description about updating the plan. The second is 'Roll out chat, teams, channels, and apps to the next group of users' (Adoption category) with progress 0/1, due date 03/18, and a description about repeating the rollout process.
- Add a new bucket:** This column is currently empty.

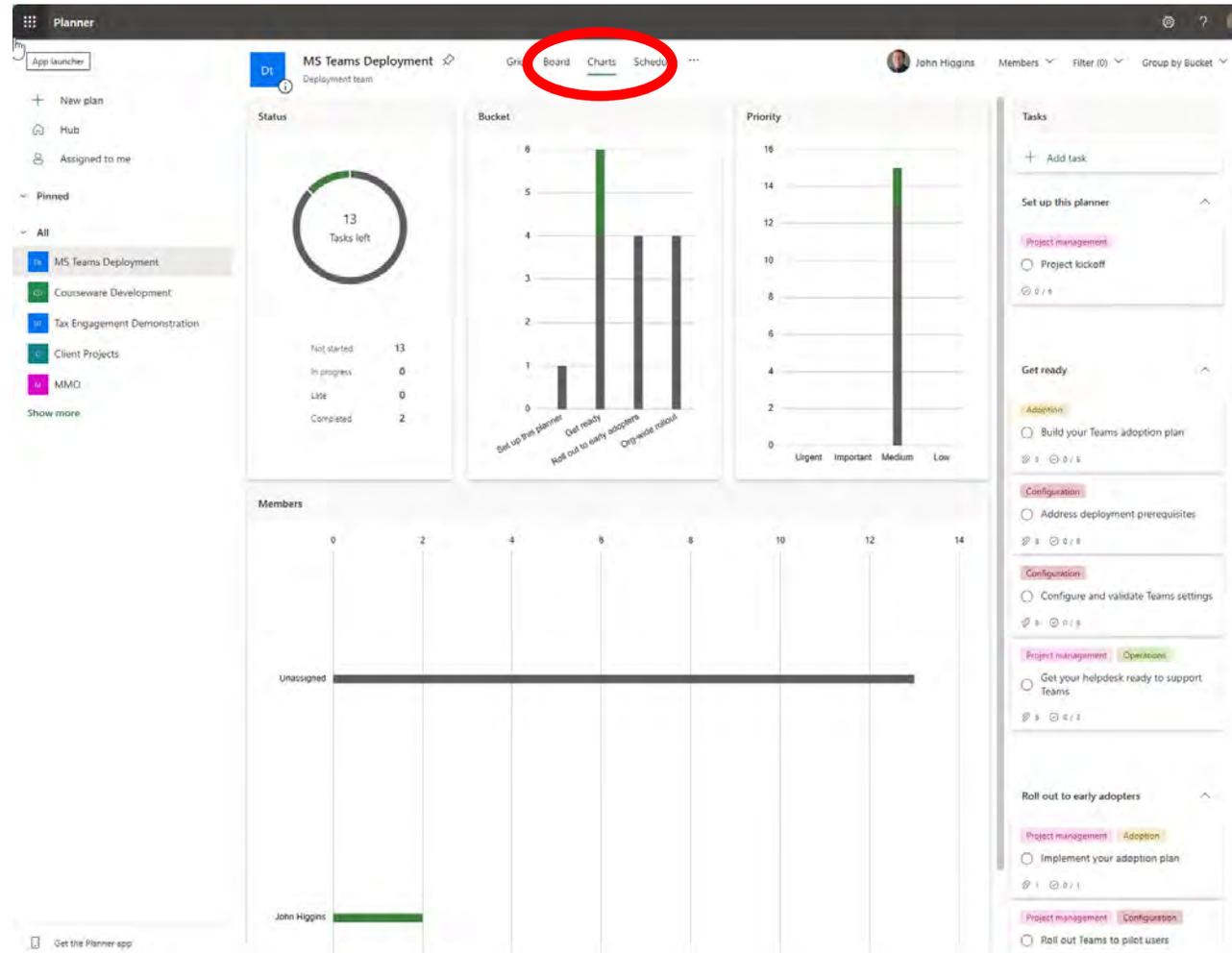
The interface includes a search bar at the top, navigation tabs for 'Grid', 'Board', 'Schedule', and 'Charts', and a 'Share' button. The 'Board View' is selected, showing tasks as cards with progress indicators and due dates.

Grid View

The screenshot shows the Microsoft Planner interface in Grid View for a plan named 'MS Teams Deployment'. The 'Grid' view selector is circled in red. The grid columns include Task Name, Assignment, Start date, Due date, Bucket, Progress, Priority, Labels, and Quick look. The 'Bucket' column header is circled in red. A yellow callout bubble labeled 'Individual Tasks' points to the task list. Another yellow callout bubble labeled 'Organizing Buckets' points to the 'Bucket' column. The 'Quick look' column header is also circled in red. The task list includes various tasks such as 'Get your helpdesk ready to support Teams', 'Configure and validate Teams settings', and 'Define usage scenarios', each with associated dates, assignments, and progress indicators.

Task Name	Assignment	Start date	Due date	Bucket	Progress	Priority	Labels	Quick look
Get your helpdesk ready to support Teams				Get ready	Not started	Medium	Operations +1	6 0/3
Configure and validate Teams settings			12/31/2025	Get ready	Not started	Medium	+1	8 0/8
Monitor usage and feedback			2/28/2025	Roll out to early a	Not started	Medium	Operations	1 0/3
Address deployment prerequisites			12/31/2025	Get ready	In progress	Medium	+1	8 0/8
Monitor Teams usage and feedback			4/24/2025	Org-wide rollout	In progress	Medium	Operations	1 0/2
Turn on Teams			3/25/2025	Org-wide rollout	Not started	Medium	Adoption	1 0/1
Build your Teams adoption plan	John Higgins		12/31/2025	Get ready	Not started	Medium	Adoption	3 2/4
Turn on Teams for pilot users			2/28/2025	Roll out to early a	Not started	Medium	+1	1 0/1
Roll out chat, teams, channels, and apps to the next gro			3/18/2025	Org-wide rollout	In progress	Medium	Adoption	1 0/1
Define usage scenarios	John Higgins		12/11/2024	Get ready	Completed	Medium	Adoption +1	1 3/6
Roll out Teams to pilot users			3/28/2025	Roll out to early a	Not started	Medium	+2	4 0/4
Learn about deploying Teams	John Higgins		11/20/2024	Get ready	Completed	Medium	+1	2 2/3
Project kickoff			12/31/2025	Set up this planne	Not started	Medium	+1	0/6
Implement your adoption plan			3/28/2025	Roll out to early a	Not started	Medium	Adoption +1	1 0/1
Update your adoption plan as needed				Org-wide rollout	Not started	Medium	Adoption	7 0/1
Identify Teams champions and early adopters				Get ready	Not started	Medium	Add label	

Reporting – Chart View



Reporting – Schedule View

The screenshot displays the Microsoft Planner interface for a project named "MS Teams Deployment". The "Schedule" view is selected, showing a calendar for January 2024. Tasks are plotted on the calendar as follows:

Day	Task
Monday, Jan 8	Project kickoff
Monday, Jan 15	Build your Teams a...
Tuesday, Jan 22	Address deployme...
Wednesday, Jan 23	Configure and vali...
Monday, Jan 29	Implement your ad...

The right-hand sidebar shows a list of "Unscheduled tasks" including "Set up this planner", "Get ready", "Get your helpdesk ready to support Teams", "Roll out to early adopters", "Org-wide rollout", and "Completed". A yellow callout bubble with the text "Unscheduled Tasks" points to this sidebar.

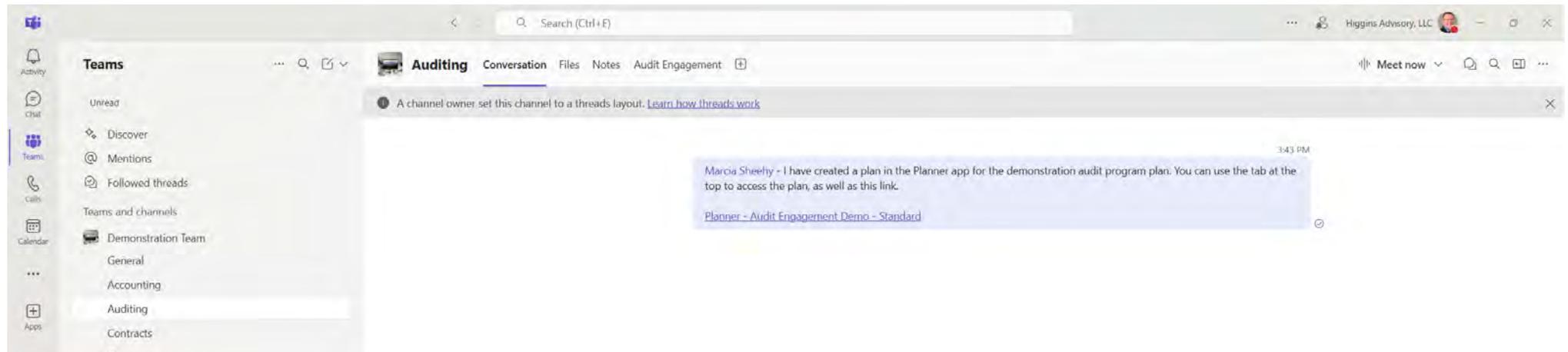
Reporting – View Options

The screenshot displays the Microsoft Teams reporting interface for a project named "MS Teams Deployment". The interface is divided into three columns: "Not started", "In progress", and "Completed". The "Completed" column is currently selected, showing a list of tasks. A red circle highlights the "Filter (0)" and "Group by Progress" dropdown menus in the top right corner. A yellow callout box labeled "Task filtering options" points to the "Filter" dropdown menu, which is open and shows various filtering criteria such as "Due (0)", "Late", "Today", "Tomorrow", "This week", "Next week", "Future", "No date", "Priority (0)", "Progress (0)", "Label (0)", "Bucket (0)", and "Assignment (0)". Another yellow callout box labeled "Task grouping options" points to the "Group by Progress" dropdown menu, which is also open and shows grouping options like "Bucket", "Assigned to", "Progress" (which is selected), "Due date", "Labels", and "Priority".

Additional Plan Features

- Plan details
- Copy link to plan
- Export plan to Excel
- Copy Plan
- Add plan to Outlook calendar

Planner / Teams Integration

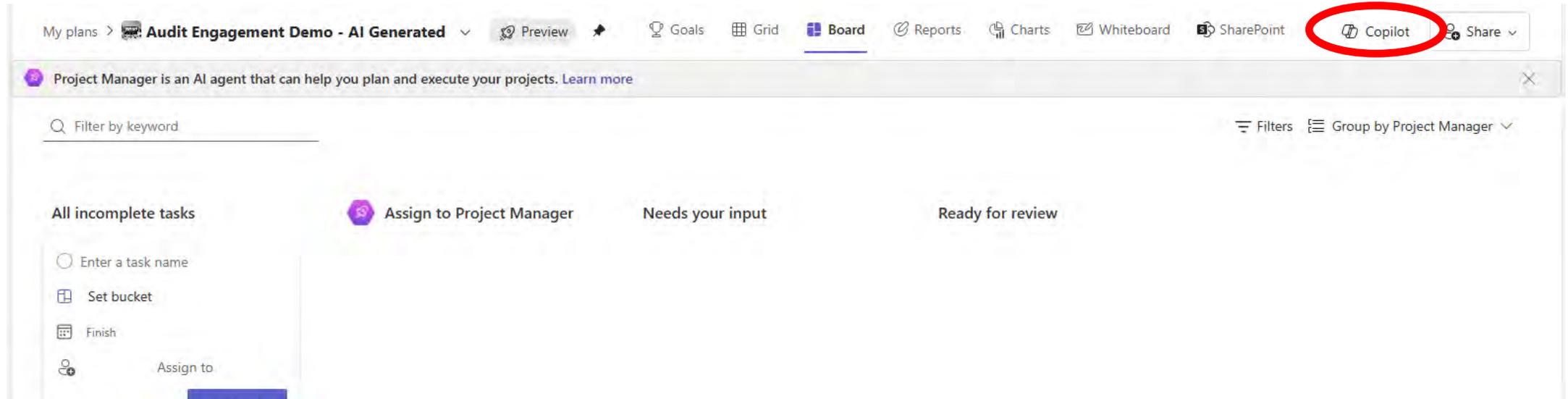


Planner / OneNote Integration

The screenshot displays the Microsoft OneNote interface. The ribbon is set to the 'Insert' tab, and the 'Auditing' sub-tab is highlighted with a red circle. Below the ribbon, the 'Demonstration Team Notebook' is open, showing a page titled 'Audit Program Excel Template'. A link labeled 'Demo Audit Plan in Planner App' is visible. Below the link, there is a document icon and the text 'sample audit program for performance measures'. The main content area shows a table with the following structure:

Audit Program: Accuracy of Performance Measures		WPreference	preparedby	reviewedby
Audit Objective				
To determine whether the agency's reported performance measures are accurate, supported, and consistent with underlying source data, definitions, and applicable laws, rules, and guidance.				

Planner / Copilot AI Integration



Planner App Licensing Plans

	Formerly Project Plan 1	Formerly Project Plan 3	Formerly Project Plan 5
Microsoft Planner Included in Microsoft 365 Sign in to Planner See Microsoft 365 plans >	Planner Plan 1 \$10.00 user/month, paid yearly (Annual subscription auto-renews) ² Buy now Or try free for one month > Trial cancellation terms apply ¹	Planner and Project Plan 3 \$30.00 user/month, paid yearly (Annual subscription auto-renews) ² Buy now Or try free for one month > Trial cancellation terms apply ¹	Planner and Project Plan 5 \$55.00 user/month, paid yearly (Annual subscription auto-renews) ² Buy now Try now with a partner >
Planner in Microsoft 365 includes: <ul style="list-style-type: none">✓ Real-time collaboration, commenting, and sharing using the Planner app in Microsoft Teams or the Planner web app✓ Creation and management of content-rich tasks with features including files, checklists, and labels✓ Tasks organized by My Day, My Tasks, and Assigned to me✓ Basic plan templates✓ Ability to view reports and dashboards²✓ Grid, Board, Schedule, and Charts views✓ Ability to view task dependencies✓ Security, compliance, data privacy, accessibility, and Microsoft 365 customer support	Planner Plan 1 includes: <ul style="list-style-type: none">✓ Creation and management of content-rich tasks with features including files, checklists, and labels✓ Project goals✓ Backlogs and sprints✓ Premium plan templates✓ Ability to build reports and dashboards²✓ Grid, Board, Timeline (Gantt), and Charts views✓ Task dependencies✓ Customization and integration✓ Security, compliance, data privacy, accessibility, and Microsoft 365 customer support	Includes everything in Planner Plan 1, plus: <ul style="list-style-type: none">✓ Microsoft 365 Copilot in Planner (preview)³✓ Task history✓ Roadmaps✓ Baselines and critical path✓ Resources request capabilities✓ Program management✓ Portfolios in Planner✓ Project financials, budgeting, and costing✓ Advanced dependencies with lead and lag✓ Project Online desktop client✓ Project Online	Includes everything in Planner and Project Plan 3, plus: <ul style="list-style-type: none">✓ Advanced portfolio management✓ Enterprise resource management and allocation 

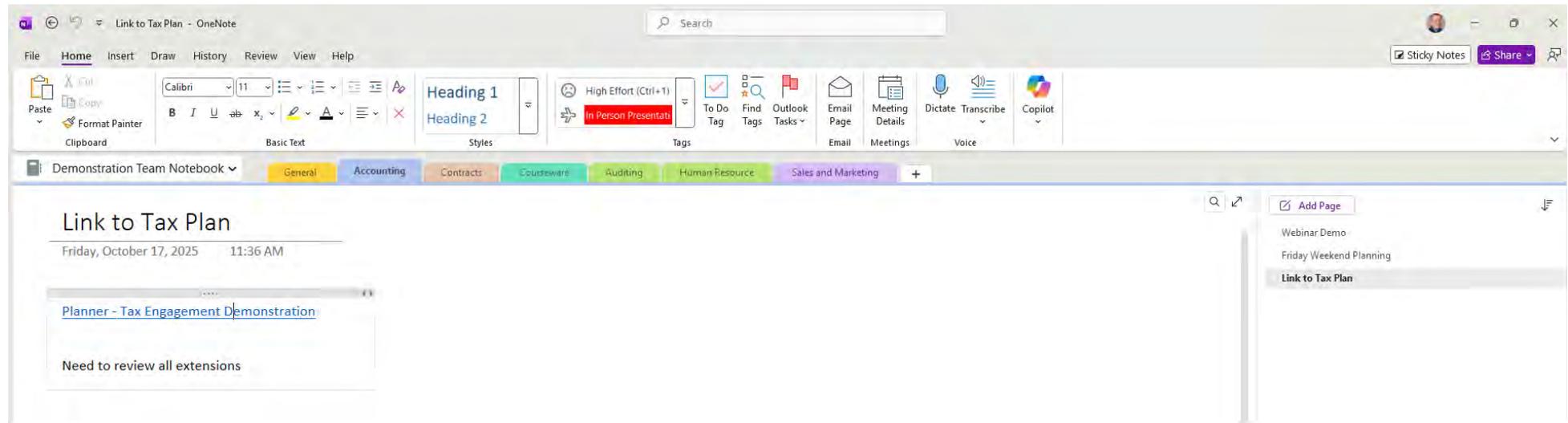
ORGANIZING NOTES AND IDEAS WITH ONENOTE



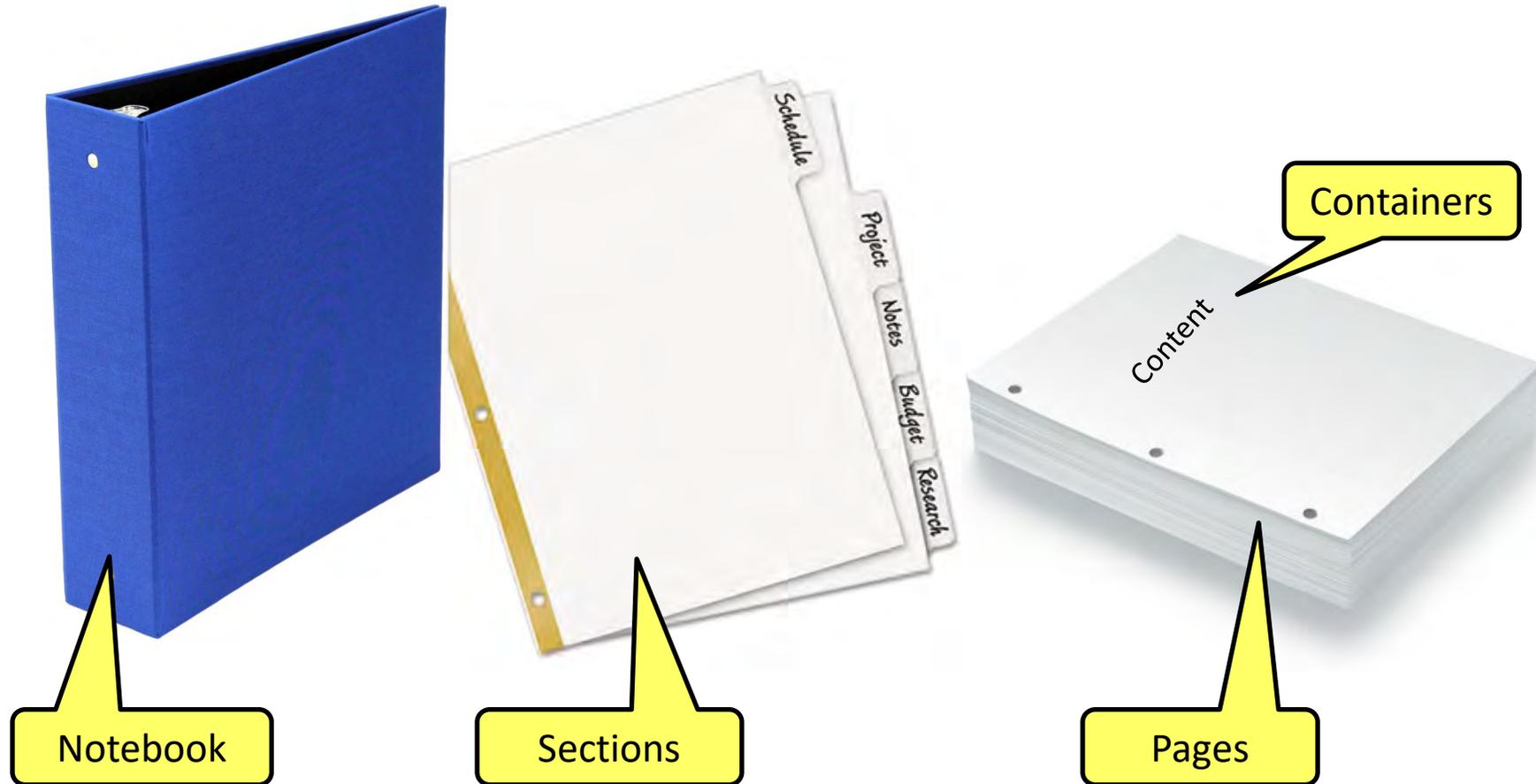
Applications for OneNote

- Document and organize notes
- Create and standardized meeting agendas
- Document and share meeting notes
- Maintain working documents
- Replace internal use of Microsoft Word
- ***Replace you paper notepad!***

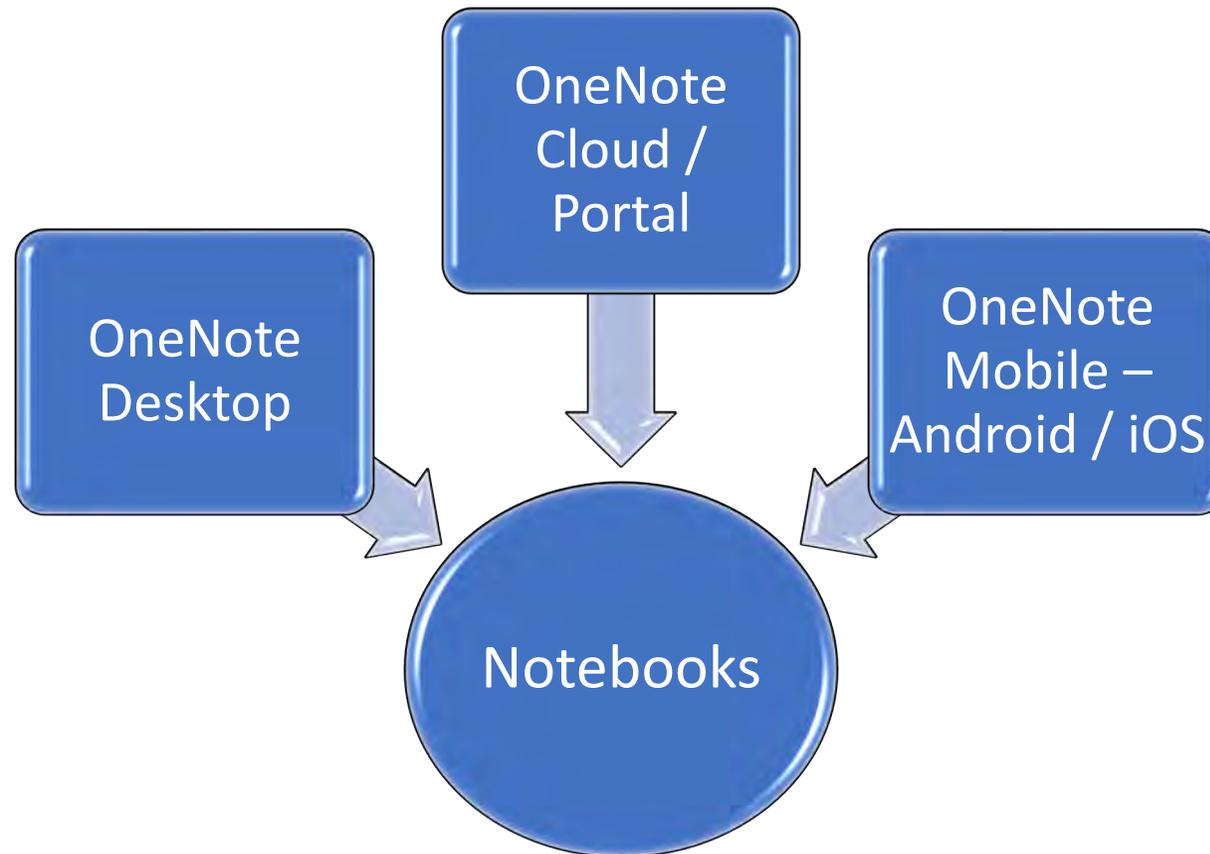
OneNote Home Screen



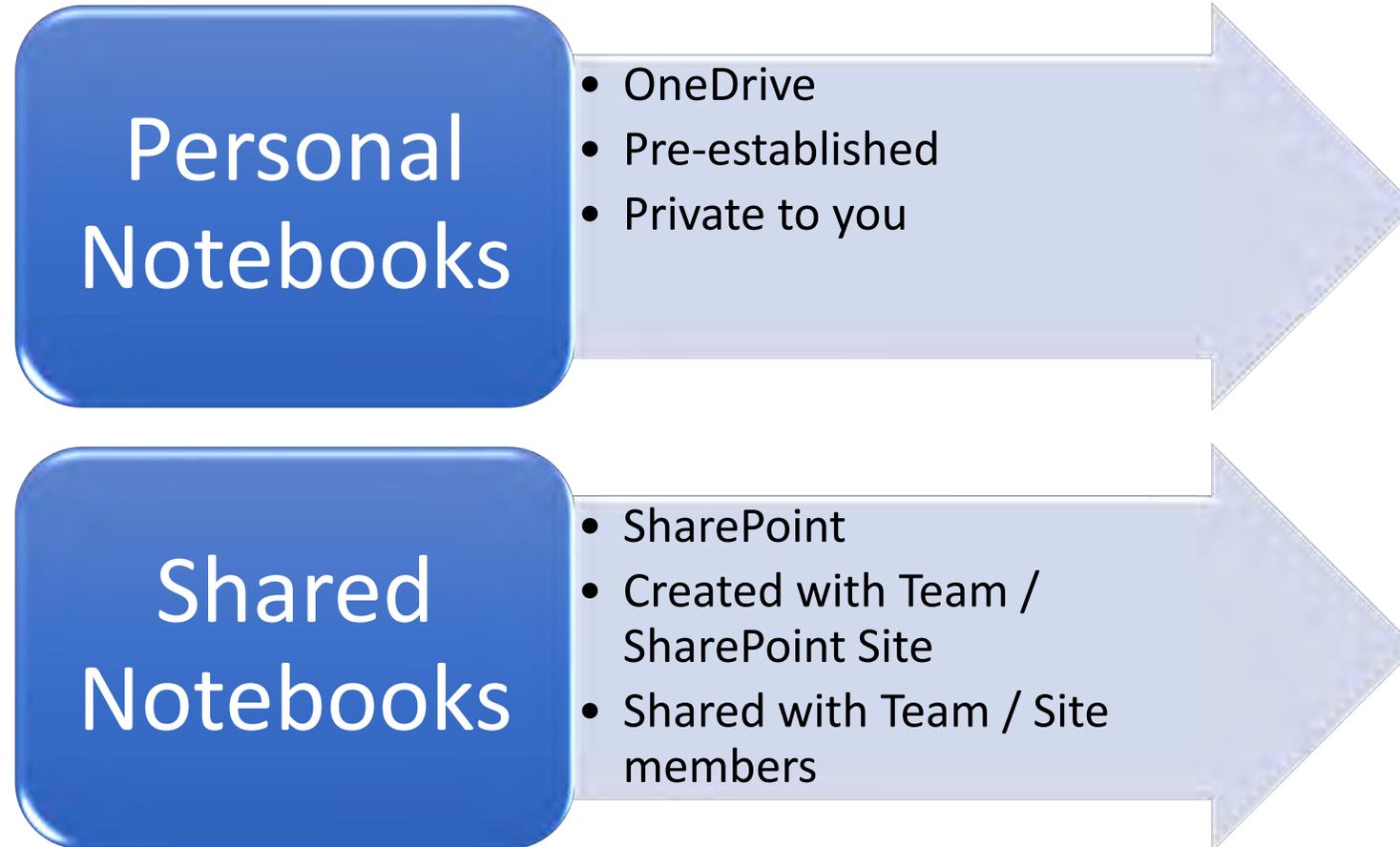
OneNote Content Organization



The OneNote Apps



OneNote Notebook Storage





OneNote App Things to Know

Supports multiple content formats

- Text / audio / video / files / drawing / links

Dictate option

One to one Teams / SharePoint / Notebook relationship

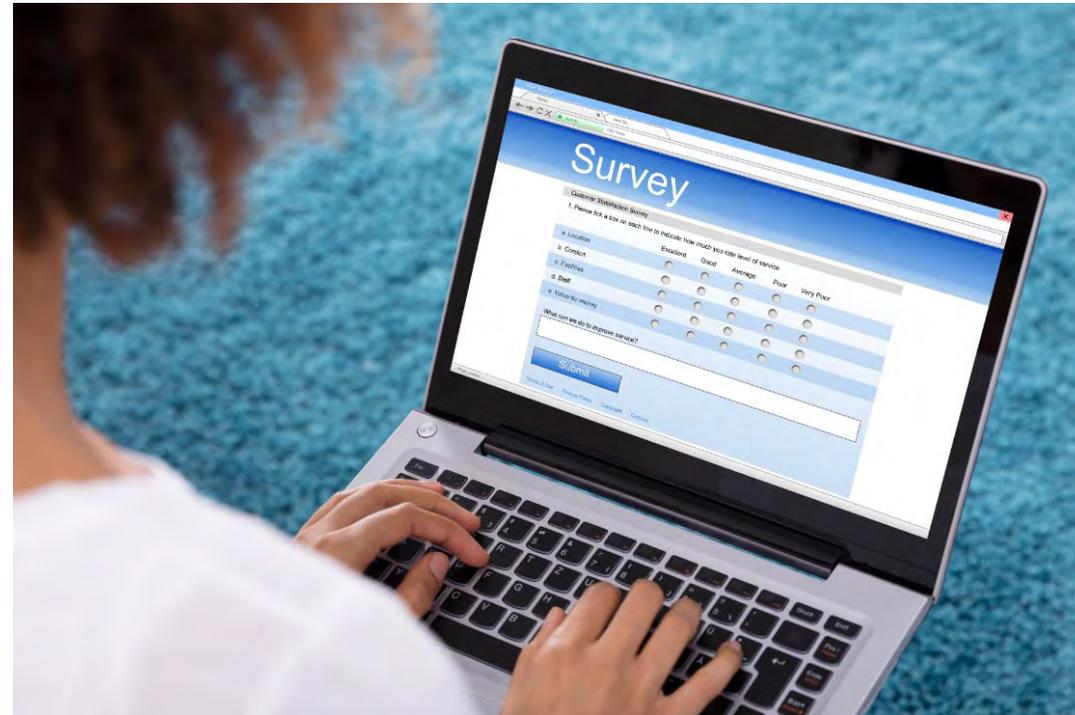
Shared access to notebooks

Custom note page templates

OneNote Features Review

- ✓ Navigating OneNote
- ✓ Creating and sharing notebooks
- ✓ Adding content to OneNote
- ✓ Tagging and searching content
- ✓ Using templates

CREATING SURVEYS AND FORMS FOR DATA COLLECTION



Applications for the Forms App

- Training / meeting evaluations
- Performance appraisals
- Customer / client satisfaction surveys
- 1040 Tax client organizer
- Skills assessment quizzes (internal / client)

Things to Know About the Forms App

Create surveys & quizzes

Not designed to create a fillable form

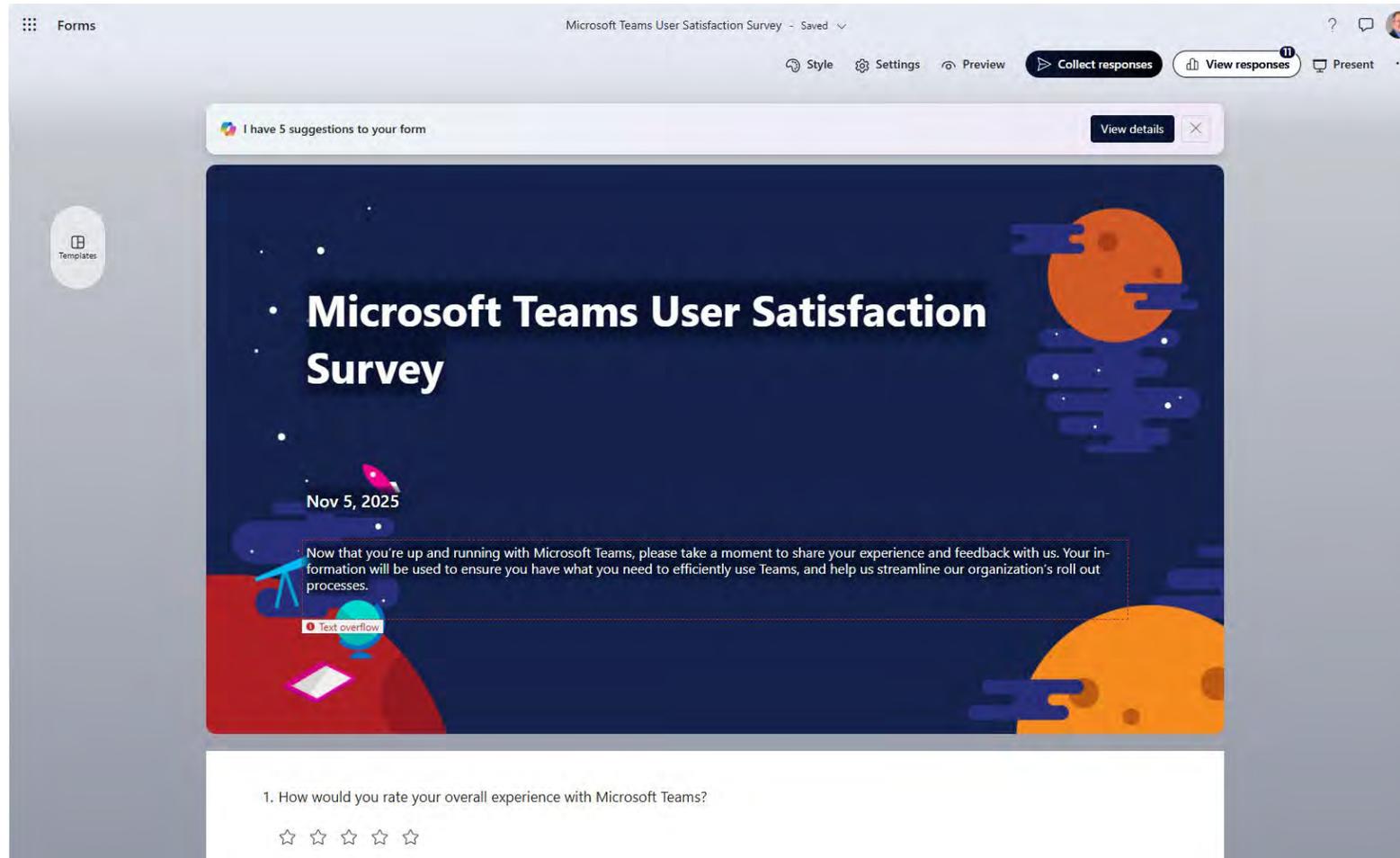
Simple and intuitive interface

“Responsive” display formatting

Pre-formatted response analysis

Direct integration with Excel for analysis

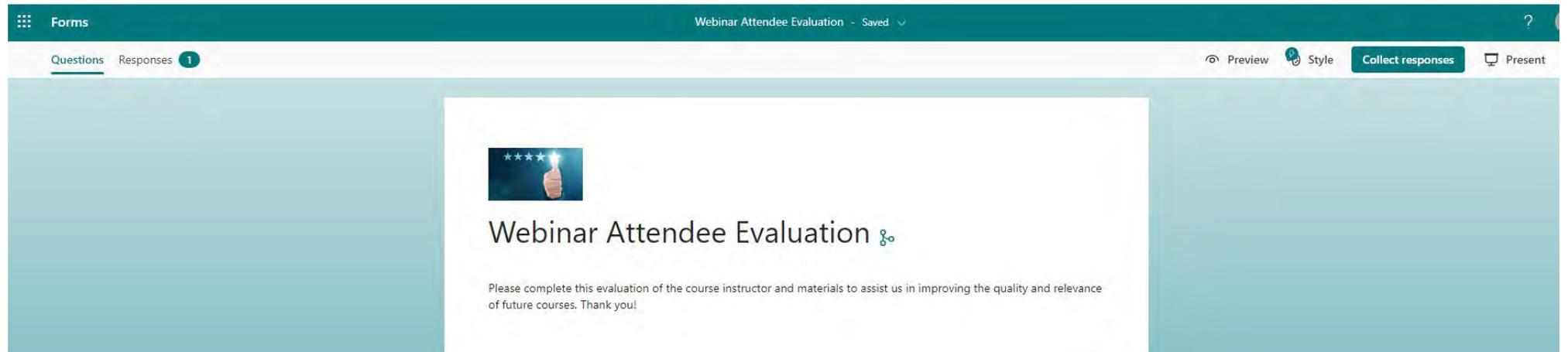
Forms App User Interface



Forms App Features to Review

- Creating a survey
- Survey question types
- Collecting and analyzing responses
- Leveraging Copilot AI in Forms app

Create Title and Introduction



The screenshot shows a form editor interface. At the top, there is a teal header bar with the text 'Forms' on the left and 'Webinar Attendee Evaluation - Saved' on the right. Below the header, there is a navigation bar with 'Questions' and 'Responses 1'. On the right side of the navigation bar, there are buttons for 'Preview', 'Style', 'Collect responses', and 'Present'. The main content area is a white box with a teal background. It features a small image of a hand pointing up with four stars above it. Below the image, the title 'Webinar Attendee Evaluation' is displayed. Underneath the title, there is a paragraph of text: 'Please complete this evaluation of the course instructor and materials to assist us in improving the quality and relevance of future courses. Thank you!'.

Create Sections, Questions & Branches

The screenshot displays a survey editor interface for a section titled "Part 1 - Attendee information". The instruction reads "Please complete the attendee information below".

Question 1 is "Full name", with a text input field containing the placeholder "Enter your answer". Below the question, there are two toggle switches: "Long answer" (disabled) and "Required" (disabled). A three-dot menu is visible to the right of these toggles.

A configuration menu is open, showing various question types: Choice (selected), Text, Rating, Date, Ranking, Likert, Upload File, Net Promoter Score, and Section.

On the right side of the editor, there are three settings: "Subtitle", "Restrictions", and "Add branching".

Add Branching If Applicable

18. Would you like to receive printed promotional information from us?

Yes Go to ▼

No Go to ▼

Go to ▼

Section

Next

✓ End of the form

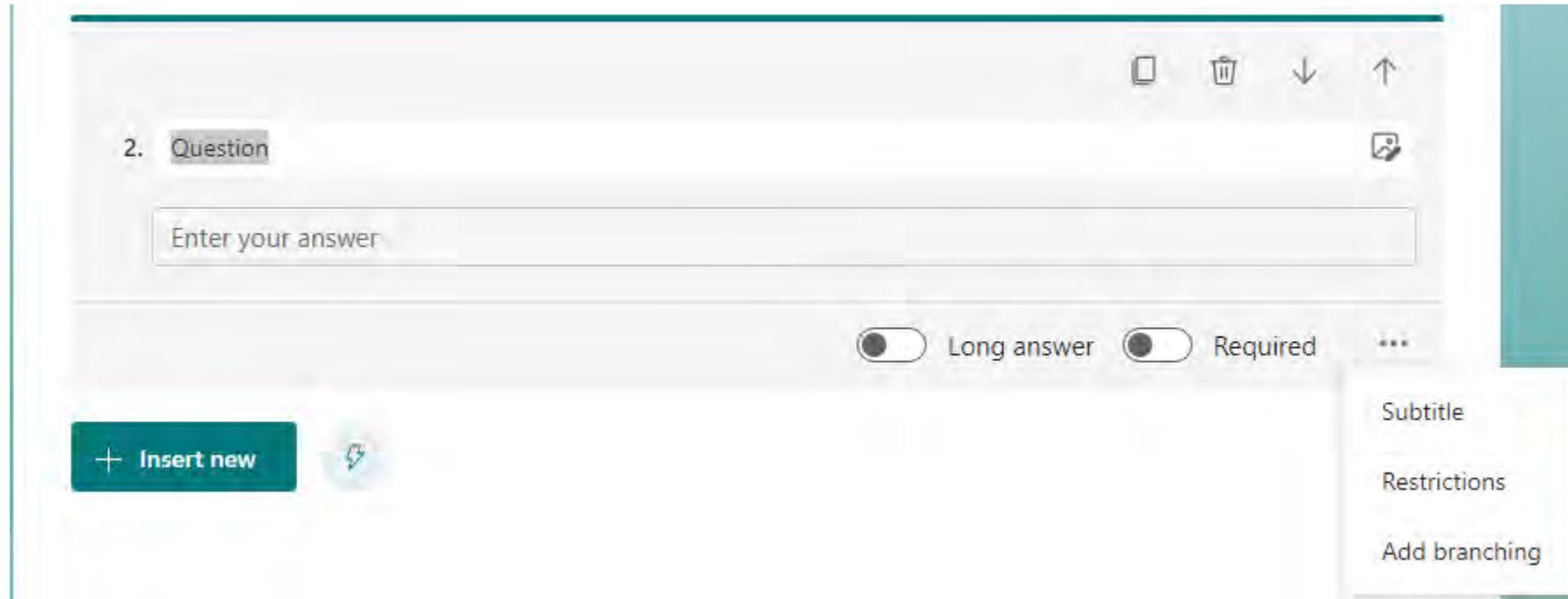
Other sections

1. Part 1 - Attendee information

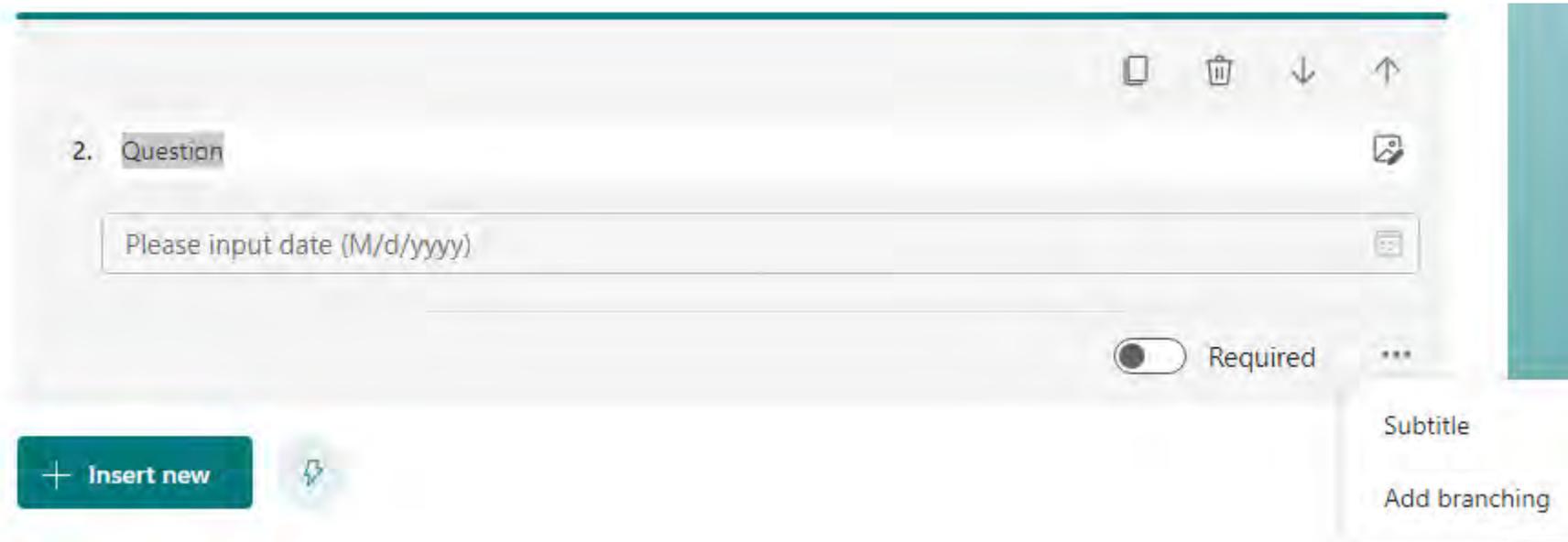
3. Contact Information

Go to

“Text” Question Type



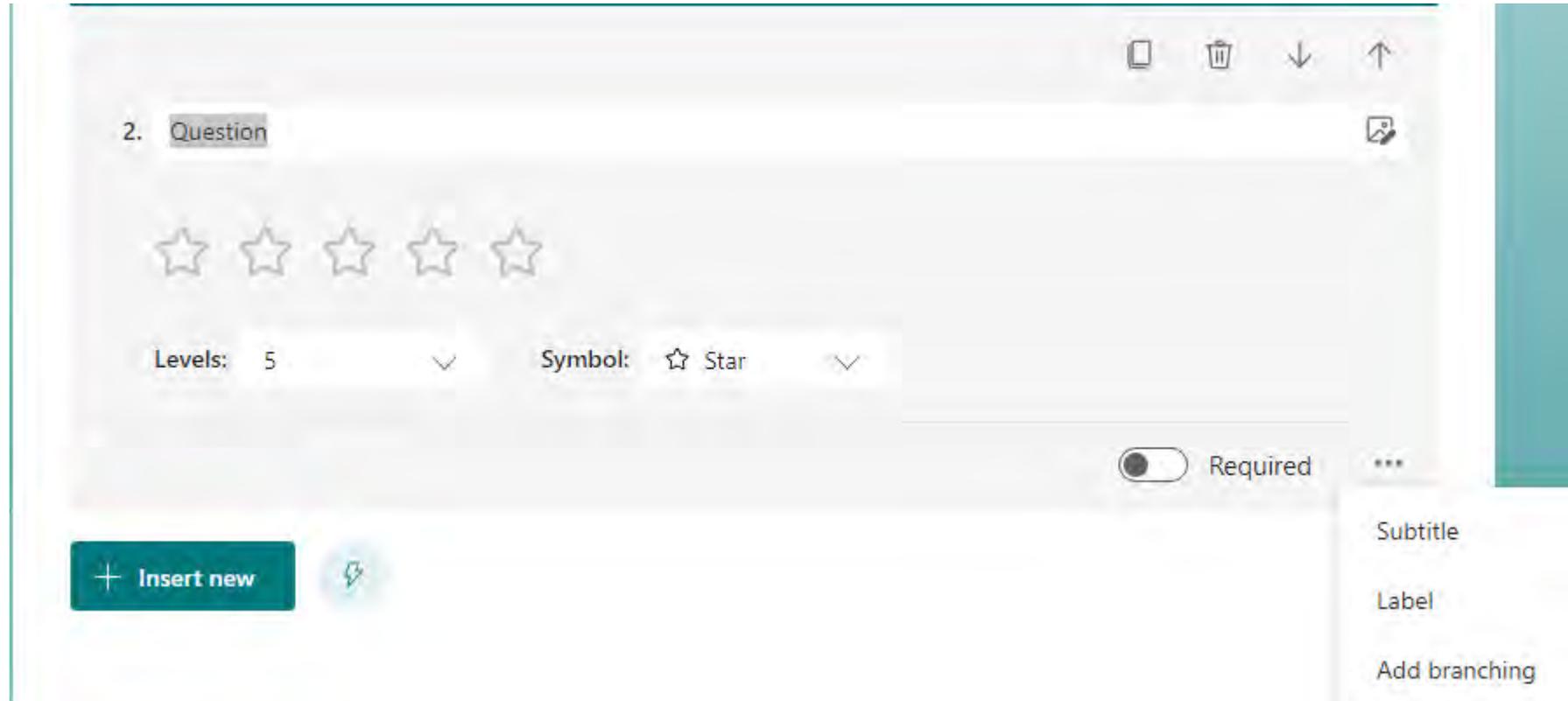
“Date” Question Type



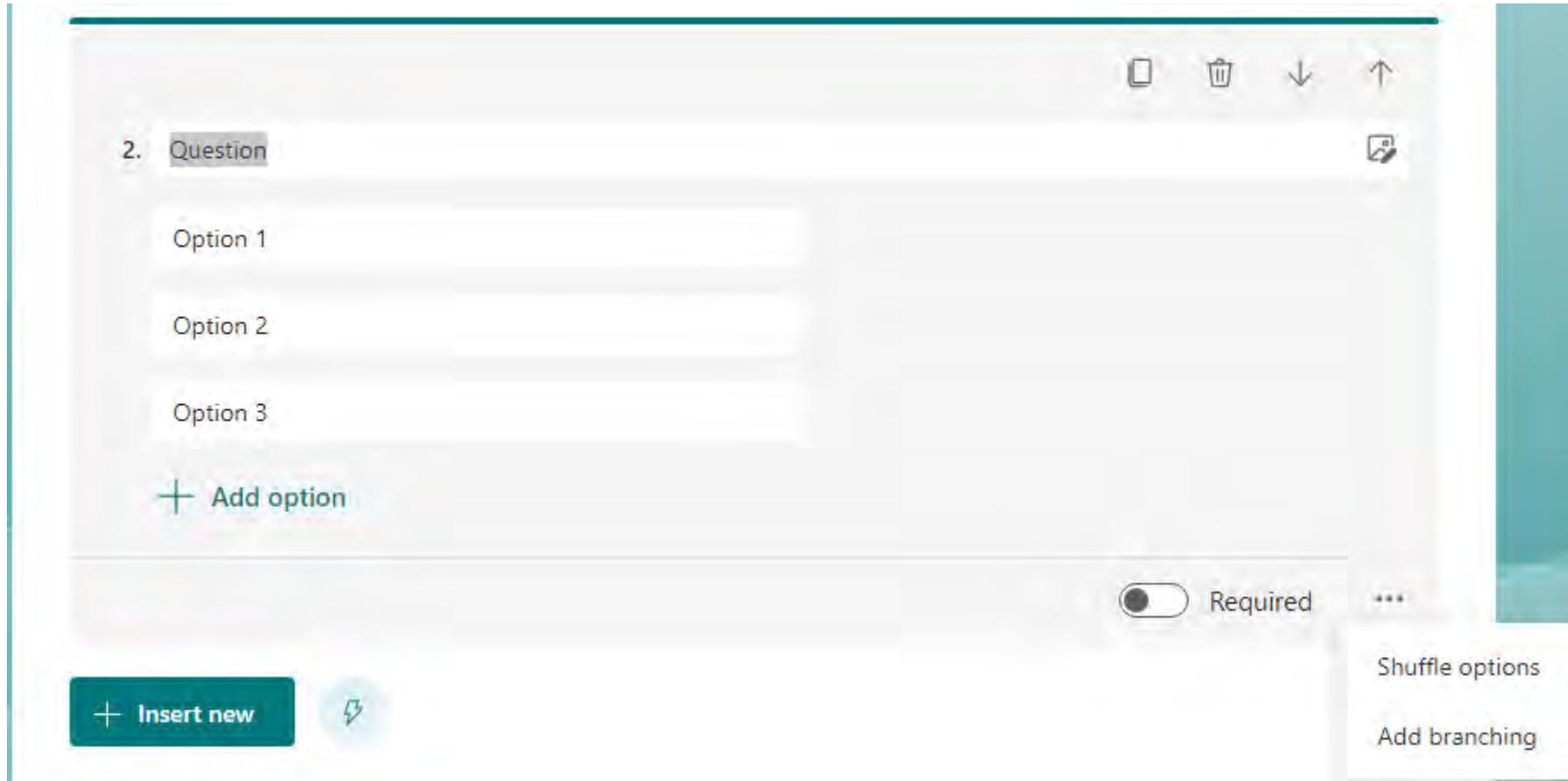
“Choice” Question Type

The screenshot displays a user interface for creating a 'Choice' question. At the top, there are icons for document, trash, down arrow, and up arrow. Below these is a text input field labeled '2. Question' with a small icon to its right. Underneath are two radio button options: 'Option 1' and 'Option 2', each with a small icon to its right. Below the options are two buttons: '+ Add option' and 'Add "Other" option'. At the bottom of the question editor, there are two toggle switches: 'Multiple answers' (which is currently turned off) and 'Required' (which is currently turned on). To the right of these toggles is a three-dot menu icon. A dropdown menu is open from this icon, showing four options: 'Shuffle options', 'Drop-down', 'Subtitle', and 'Add branching'. Below the question editor is a teal button labeled '+ Insert new' with a lightning bolt icon to its right. At the bottom of the interface, the text '3. Email' is visible.

“Rating” Question Type



“Ranking” Question Type



“Likert” Question Type

The screenshot displays a user interface for creating a Likert question. At the top, there are icons for copy, delete, down arrow, and up arrow. Below these is a header row with the text "2. Question" and a plus icon. The main area is a table with five columns labeled "Option 1" through "Option 5" and a plus icon in the sixth column. Two rows are visible, labeled "Statement 1" and "Statement 2", each containing five radio buttons. Below the table is a button labeled "+ Add statement". At the bottom right, there is a toggle switch labeled "Required" which is currently turned on, and a three-dot menu icon. The menu is open, showing options for "Subtitle" and "Add branching". At the bottom left, there is a button labeled "+ Insert new" and a lightning bolt icon.

	Option 1	Option 2	Option 3	Option 4	Option 5	+
Statement 1	<input type="radio"/>					
Statement 2	<input type="radio"/>					
+ Add statement						

Required ⋮

- Subtitle
- Add branching

+ Insert new ⚡

“File Upload” Question Type

The screenshot shows a survey question editor interface. At the top right, there are icons for copy, delete, down arrow, and up arrow. The question text is "2. Question" with a question mark icon to its right. Below the question text is a label "Upload file:" followed by a large, light gray rectangular area for file selection. Underneath this area are two dropdown menus: "File number limit:" set to "1" and "Single file size limit:" set to "10MB". At the bottom right of the question editor is a toggle switch labeled "Required" which is currently turned on, and a three-dot menu icon. A dropdown menu is open from the three-dot icon, showing three options: "Subtitle", "File type", and "Add branching". At the bottom left of the editor is a teal button with a plus sign and the text "Insert new", followed by a lightning bolt icon.

File uploads are available only for surveys sent to people within your organization

“Net Promoter Score” Question Type

The screenshot shows a configuration interface for a Net Promoter Score (NPS) question. The question text is "2. How likely are you to recommend us to a friend or colleague?". Below the question is a horizontal scale with 11 buttons labeled 0 through 10. The scale is anchored with "Not at all likely" on the left and "Extremely likely" on the right. At the bottom right of the question area, there is a "Required" toggle switch which is currently turned on, and a three-dot menu icon. The menu is open, showing two options: "Subtitle" and "Add branching". At the bottom left of the interface, there is a teal button labeled "+ Insert new" and a lightning bolt icon.

Update Survey Settings

Settings

Who can fill out this form

- Anyone can respond
- Only people in Higgins Advisory, LLC can respond
Sign-in required to validate access within Higgins Advisory, LLC
- Record name
- One response per person
- Specific people in Higgins Advisory, LLC can respond

Options for responses

- Accept responses
- Start date
- End date
- Set time duration ⓘ
- Shuffle questions
- Disable question number for respondents
- Show progress bar
- Hide **Submit another response**

- Customize thank you message

Thank you for completing this evaluation survey. Your feedback is important to us and much appreciated.

- Allow respondents to save their responses
- Allow respondents to edit their responses

Response receipts

- Allow receipt of responses after submission
- Get email notification of each response
- Get smart notification emails to track the response status ⓘ

Preview & Test Survey

← Back Computer Mobile

English (United States) ▾



Webinar Attendee Evaluation

Please complete this evaluation of the course instructor and materials to assist us in improving the quality and relevance of future courses. Thank you!

Hi, John. When you submit this form, the owner will see your name and email address.

Part 1 - Attendee information

Please complete the attendee information below

1. Full name

2. Email Address

English (United States) ▾



Webinar Attendee Evaluation

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Part 1 - Attendee information

Please complete the attendee information below

1. Full name

DISTRIBUTING SURVEYS AND COLLECTING RESPONSES



Send and Collect Responses

Send and collect responses

- Anyone can respond
- Only people in Higgins Advisory, LLC can respond
Sign-in required to validate access within Higgins Advisory, LLC
- Record name
- One response per person
- Specific people in Higgins Advisory, LLC can respond

[Feedback](#)

<https://forms.office.com/Pages/ResponsePag...> [Copy link](#)

Shorten URL

Webinar Attendee Evaluation

Responders will see the form like this.

Send Survey Link via Outlook or Teams

Send and collect responses

- Anyone can respond
- Only people in Higgins Advisory, LLC can respond
Sign-in required to validate access within Higgins Advisory, LLC
- Record name
- One response per person
- Specific people in Higgins Advisory, LLC can respond

To: Name, group, chat or channel...

You are invited to take this:
Webinar Attendee Evaluation

Hi! Would you mind taking 7 minutes to complete this form?
It would be great if you can submit your response by Feb 2, 2024. Thank you!

Outlook Teams (Message only)

Invitation will be sent via Outlook

Send

Feedback

Invite via QR Code

Send and collect responses

- Anyone can respond
- Only people in Higgins Advisory, LLC can respond
Sign-in required to validate access within Higgins Advisory, LLC
- Record name
- One response per person
- Specific people in Higgins Advisory, LLC can respond

 Feedback

Webinar Attendee Evaluation



Recipients can scan the code on a phone or tablet to access the form.

[Download](#)

Embed Survey Link in Website

Send and collect responses

- Anyone can respond
- Only people in Higgins Advisory, LLC can respond
Sign-in required to validate access within Higgins Advisory, LLC
- Record name
- One response per person
- Specific people in Higgins Advisory, LLC can respond

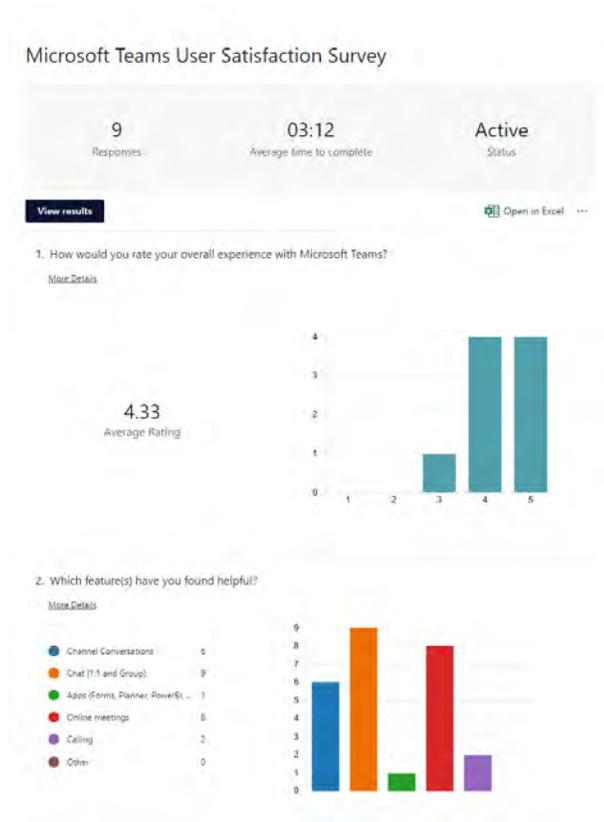
Feedback

Copy this code and paste it in a webpage or Sway.

```
<iframe width="640px" height="480px" src="https://forms.office..."
```

Copy

ANALYZING SURVEY RESULTS



Review Response Summary

View individual responses

Microsoft Teams User Satisfaction Survey

11 Responses 02:48 Average time to complete Active Status

[View results](#)

1. How would you rate your overall experience with Microsoft Teams?

[More Details](#) [Insights](#)

4.27 Average Rating

Rating	Number of Responses
1	0
2	0
3	1
4	6
5	4

Analyze results in Excel

RECORDING AND EDITING VIDEOS WITH CLIPCHAMP ~~AND STREAM~~



Important Note

- Effective mid 2025, Microsoft has combined the Stream and Clipchamp apps into a unified interface under the Clipchamp brand
- You may still see the Stream app in your M365 portal.
- Recommendation is to use Clipchamp exclusively going forward.

Applications for Clipchamp

- Manage Teams meeting recordings
- Document internal business processes
- Create promotional videos
- Create on demand learning videos
- Use Copilot to create, summarize and query videos

Clipchamp Home Screen

The screenshot shows the Clipchamp home screen. At the top, there is a navigation bar with the Clipchamp logo, a search bar, and user profile icons. Below the navigation bar is a purple banner with the text "Create and watch videos, all in one place". Underneath the banner are two buttons: "Create a new video" and "Edit a video". Below these buttons are five video thumbnails with labels: "Upload a video", "Screen recording", "Camera recording", "Video project", and "Playlist". At the bottom, there is a filter section with tabs for "Recent", "All", "Created by me", "Meetings", "Playlists", "Projects", and "Favorites". A search bar for filtering by name or person is also present. Below the filter section is a table with columns for "Name", "Opened", "Owner", and "Activity".

Name	Opened	Owner	Activity
 HeyGen Demo Video CPA Associations	Fri at 12:39 PM	John Higgins	

Document Processes

The screenshot displays the Microsoft Stream recording interface. At the top, it says "Stream" and "Recording in progress". A central window shows a Microsoft Teams meeting with a text overlay that reads: "Step 1: Open Microsoft Teams 'First, open the Microsoft Teams app on". The meeting content includes a list of tasks and a video feed of a man in the bottom left corner. The interface also features a "Task Templates" panel on the right and a "Record again" button at the bottom left. A "Review" button is located at the bottom right. A disclaimer at the bottom states: "By recording, you agree to comply with your organization's terms, that you have the necessary permissions from people in your video, and that you will respect the copyright and privacy rights of others."

Bookings App – Streamline appointment scheduling



Things to Know About the Bookings App

Bookings app is included with all Microsoft 365 subscription plans

Streamlines and automates internal and external appointment scheduling

Directly integrates with Outlook and Teams

Available as an app in Teams

Personal or shared booking page option

Detailed setup instructions provided by Microsoft [Bookings support page](#)

Shared Booking Page

HIGGINS
ADVISORY, LLC

Higgins Advisory, LLC

SELECT A SERVICE

2-hour Advisory Meeting
Please use this option to book a meeting for... Read more
2 hours

1-hour meeting
Schedule a 1-hour meeting... Read more
1 hour

30-minute meeting
Schedule a 30 minute meeting... Read more
30 minutes

Booking for 1-hour meeting

January 04, 10:15 am

DATE TIME

January 2024						
Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

9:15 AM	9:45 AM	10:15 AM
10:45 AM	11:15 AM	11:45 AM
12:15 PM	12:45 PM	1:15 PM
1:45 PM	2:15 PM	2:45 PM
3:15 PM	3:45 PM	

All times are in (UTC-05:00) Eastern Time (US & Canada)

ADD YOUR DETAILS

First and last name *
John Doe

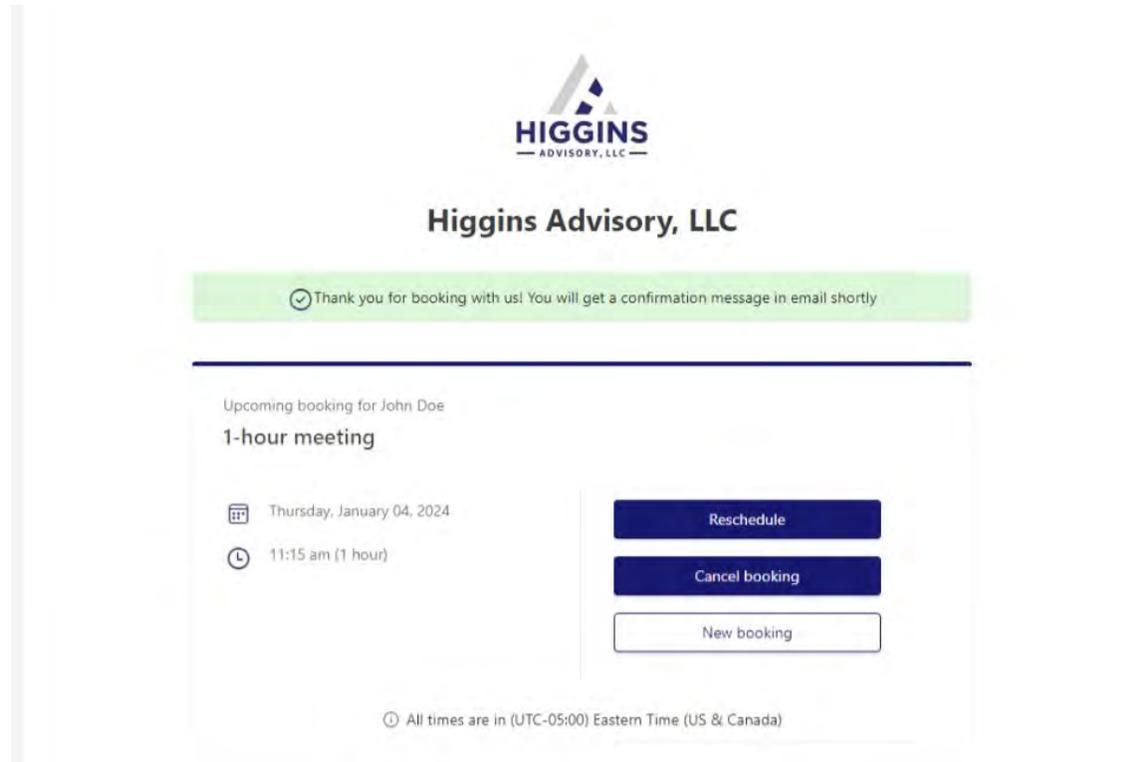
Notes
This is a demonstration of booking an appointment on the bookings page.

Email *
joh221@gmail.com

Data Collection Policy: When booking an appointment on our public calendar, only the information you provide is stored. Higgins Advisory, LLC guarantees that this data will not be sold or shared with external parties, your privacy and trust are our top priority.

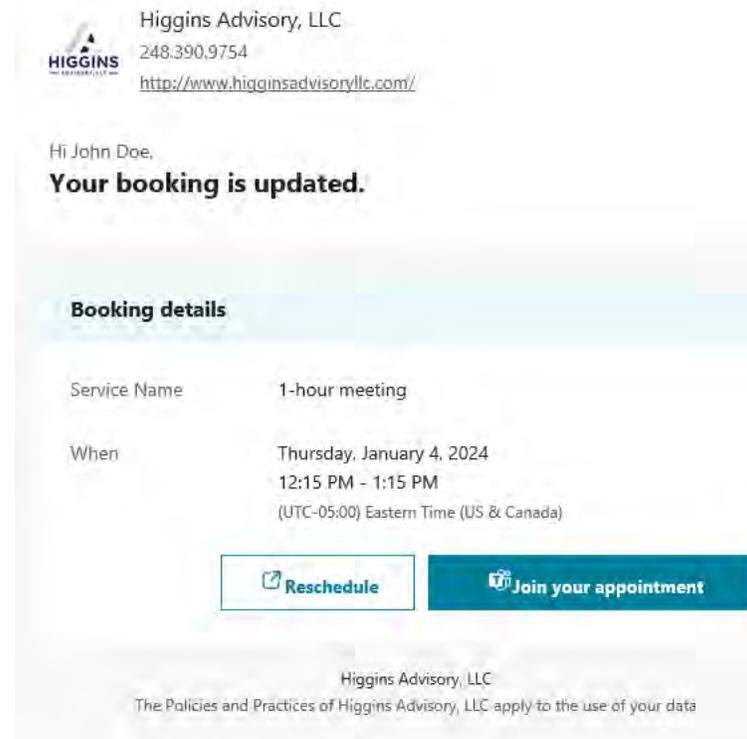
Book

Web Page Booking Confirmation



The screenshot shows a web page for Higgins Advisory, LLC. At the top center is the company logo, which consists of a stylized 'A' shape made of three triangles (two grey, one blue) above the text 'HIGGINS ADVISORY, LLC'. Below the logo is the company name 'Higgins Advisory, LLC' in a bold, dark blue font. A green horizontal bar with a white checkmark icon contains the text: 'Thank you for booking with us! You will get a confirmation message in email shortly'. Below this bar is a white box with a thin blue border. Inside this box, the text 'Upcoming booking for John Doe' is followed by '1-hour meeting' in bold. Below this, there are two rows of information: the first row shows a calendar icon followed by 'Thursday, January 04, 2024', and the second row shows a clock icon followed by '11:15 am (1 hour)'. To the right of this information are three buttons: 'Reschedule' (dark blue), 'Cancel booking' (dark blue), and 'New booking' (white with a blue border). At the bottom of the white box, there is a small icon of a clock and the text 'All times are in (UTC-05:00) Eastern Time (US & Canada)'.

Client / Customer Booking Email Confirmation



Configure Staff

The screenshot displays the 'Bookings' application interface. On the left, a navigation menu includes 'Calendar', 'Booking page', 'Customers', 'Staff' (highlighted with a red circle), 'Services', 'Business information', and 'Integrations'. The main content area shows the profile for 'John Higgins', an Administrator. Below the profile, there are tabs for 'Overview', 'Contact', 'Calendar and Availability', and 'Services'. The 'Overview' tab is active, showing 'No upcoming appointments' and a 'Show in calendar' button. The 'Contact Information' section lists 'Email: john@higginsadvisoryllc.com', 'Phone number: 248-390-9754', and 'Teams: john@higginsadvisoryllc.com'. The 'Membership information' section shows 'Status: Bookable', 'Last changed: Sun 11/26/2023 2:53 PM', and 'Email last sent: Sun 11/26/2023 2:53 PM | Re-send'. A 'Show more contact information' button is also present. The 'Services' section has a 'Show services' button.

Configure Services

The screenshot shows the Microsoft Bookings interface. On the left, a navigation pane lists various options: Calendar, Booking page, Customers, Staff, **Services** (highlighted with a red circle), Business information, and Integrations. The main content area is titled '30-min meeting' and includes a search bar, a list of services (showing '30-min meeting' with a 30-minute duration), and tabs for Overview, Service details, Calendar and Availability, and Staff. The 'Service details' tab is active, displaying the following information:

- Service booking page: <https://outlook.office365.co...>
- Duration: 30 minutes
- Default price: Price not set
- Description: Grab some time with us for ...

Below the details, there are links for 'Show all service details' and 'Show all assigned staff'.

Configure Business Information

The screenshot shows a web interface for configuring business information. At the top, there is a blue header with a grid icon and the text 'Bookings'. Below the header, there is a navigation bar with a back arrow and the text 'Back to all booking pages'. To the right of the navigation bar are 'Save' and 'Discard' buttons. The main content area is titled 'Business information' and contains several sections:

- Basic details:** Includes business name, address, phone, links and other basic details.
- Privacy policy and Terms and conditions:** Enter business Privacy policy and Terms and conditions details.
- Business logo:** Add or change your business logo that your customers will see in your booking page, reminders and messages. This section includes a placeholder image of two people sitting at a table and two buttons: 'Change logo' and 'Delete logo'.
- Business hours:** Enter information about your business hours.
- ACS App Integration:** Connect your Azure Communication Service App with Bookings.

On the left side of the interface, there is a sidebar menu with the following items: Calendar, Booking page, Customers, Staff, Services, Business information (highlighted), and Integrations. Above the sidebar menu, there is a dropdown menu for 'Demonstration Booking ...'.

Personal Booking Page Meeting Type

New meeting type

 Add a title

 [+ Category](#) 

 Add a description

 Location  Teams meeting

 30 mins 

 **Public**
These will appear on your booking page

Private
Only people with a booking link can view this

Schedule customization 

 Use my regular meeting hours  [See regular meeting hours](#)

[+ Advanced options](#)

Lists App - Create and manage customized lists



Microsoft Lists

+ Add new item Edit in grid view Undo Share Copy link Export Forms **New** Automate Integrate

My lists
Higgins Advisory, LLC Expense Tracker ☆

Item	Date	Amount	Category	Description
Postage stamps	September 29, 2023	\$15.00	Postage	20 Forever stamps
Lunch with ABC Co	December 15, 2023	\$45.00	Meals / Entertainmer	
Dinner	July 17, 2024	\$50.00	Meals / Entertainmer	
		Sum 110.00		

New item

Item *
Enter value here

You can't leave this blank.

Date
Enter a date

Amount
\$ Enter a number

Category
—

Description
Enter value here

Receipt
Add an image

Attachments
Add attachments

Power Automate – Automate business processes



The screenshot displays the Microsoft Power Automate interface with a blue header bar. The header includes the text "Environments Higgins Advisory, LLC (...)" and icons for help, refresh, and settings. The main area contains a grid of 16 flow cards, each with a title, author, and frequency. The flows are:

- Notify and Email when a new file is uploaded to OneDrive** (Automated, 24682) - By Microsoft Power Automate Community
- Trigger a flow with a Power BI data-driven alert** (Automated, 185669) - By Microsoft
- Save Office 365 email attachments to specified OneDrive for Business folder** (Automated, 341615) - By Microsoft Power Automate Community
- Notify about rows in a SQL DB** (Scheduled, 11016) - By Microsoft Power Automate Community
- Notify me and store the response when a student completes a quiz** (Automated, 100975) - By Microsoft Power Automate Community
- Send me an email when a new message is added in Microsoft Teams channel** (Automated, 152645) - By Microsoft Power Automate Community
- Create a task in Planner from Microsoft Forms and post message in Teams** (Automated, 212161) - By Microsoft Power Automate Community
- Send an email to responder when response submitted in Microsoft Forms** (Automated, 546017) - By Microsoft Power Automate Community
- Get a push notification when a new file is added in OneDrive for Business** (Automated, 100826) - By Microsoft
- Form processing to email and SharePoint** (Automated, 318651) - By Microsoft
- Save Gmail attachments to your Google Drive** (Automated, 76803) - By Microsoft
- Send specific files created in OneDrive for Business as email attachments** (Automated, 49495) - By Microsoft Power Automate Community
- Send an email when a survey response is submitted on Survey123** (Automated, 12850) - By Microsoft Power Automate Community
- Email me with a list of upcoming Calendar events** (Scheduled, 54469) - By Microsoft Power Automate Community
- Email yourself new Tweets about a certain keyword** (Automated, 6657) - By Microsoft
- Add Planner tasks to an Excel Online Business spreadsheet on weekly basis** (Scheduled, 36428) - By Microsoft Power Automate Community

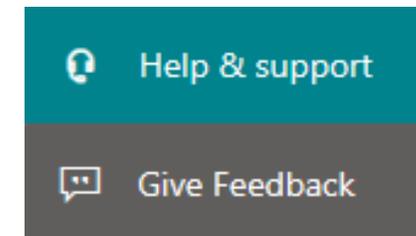
GETTING HELP



Where Can I Get Help?

Implementation & Support Resources:

- Probably not your current IT support!
- [Microsoft sponsored 365 training & support](#)
- [LinkedIn Learning](#)
- Microsoft 365 CPE programs
- Microsoft 365 Admin support
- [Microsoft Support Offering](#)
- Microsoft Business Partners
- [Upwork](#) for Microsoft support



Microsoft Self-service Support

Help & support

Give Feedback

Help Support History

How can we help?

Tell us your problem so we can get you the right help and support.

How do I configure to allow guest users in Teams

- How do I enable Teams Guest Access
- Cannot add guest to teams
- How do I allow Skype for Business users to communicate with people with regular Skype
- Guest user is unable to access files in Teams
- How do I configure Teams Direct Routing

Self Help Contact Support Support History

How can we help?

Tell us your problem so we can get you the right help and support.

How do I configure to allow guest users in Teams

Adding external guest users to Teams is a powerful collaboration tool. Lets learn more about the problem you are having so we can provide the best solution.

Note that in many cases, the best step is to run the support diagnostic we offer which will run comprehensive tests on your configuration and offer the most accurate solution.

Is your Guest access issue affecting specific guests, or all guest accounts?

Issue is with all guest accounts

Only happens to specific guests

More Help

[Guest access in Microsoft Teams - Microsoft Teams](#)
Guest access in Teams requires configuring other settings in Microsoft 365, including settings in Microsoft Entra ID. Microsof...

[Turn guest access in Microsoft Teams on or off](#)
Configure guest access in the Teams admin center. Sign in to the Microsoft Teams admin center. Select Users > Guest access. Set...

[Use guest access and external access to collaborate with p...](#)
1 Provided that the user has been added as a guest and is signed in with the guest account. 2 Only by email or Session Initiation...

Contact support Legal | Privacy & Cookies

Back

Self Help **Contact Support** Support History

Get support from an agent

Please include #M365Copilot in the Title if you are contacting us for a Copilot issue.

Title*

How do I configure to allow guest users in Teams

Description (Stronger descriptions result in quicker resolutions)

Describe your issue in detail

Confirm your number*

+1

Please enter a valid phone number

Confirm email addresses of authorized contacts* (i)

Microsoft will work directly with contacts listed to resolve this service request.

Please enter a valid email address

Consent to the recording of all calls necessary to resolve this service request. This can be changed at any time.* (i)

--choose one--

Attachments (i)

Add a file or screenshot or video

Contact us Legal | Privacy & Cookies

Microsoft Business Partners

The screenshot displays the Microsoft AppSource Partners interface. At the top, the Microsoft logo and 'AppSource' are visible. A search bar contains the text 'cygnus'. Below the search bar, navigation tabs include 'All', 'Apps', 'Categories', 'Industries', 'Consulting Services', and 'Partners'. The main heading is 'Browse partners' with a subtext 'Filter and sort partners to refine the results.' On the left, a 'Filters' sidebar includes a 'Clear all' link, a 'Search filters' input, a location filter for '48306, Rochester, Michigan, United States (100 mi radius)', and several expandable categories: 'Microsoft Customer Size', 'Partner capabilities', 'Industries', 'Products (1)', 'Solution category', 'Services', and 'Environmental, Social, Govern...'. A 'Microsoft 365' filter is applied. The main area shows 'All results' sorted by 'Best match'. There are ten partner cards displayed in a grid. Each card includes a logo, the partner name, location, Microsoft services (e.g., Azure, Teams), and a brief description. A 'Contact me' button is present on each card. The partners shown are: Red Level, TMR Consulting (Private) Limited, Apex Digital Solutions, Worksgighted LLC, OnPar Technologies, CrucialLogics Inc., Sentinel Technologies Inc., Communication Square, TechHouse, and EEC Services FZ LLC.

WRAP-UP



In Summary

- Microsoft 365 is one of the most underutilized software investments in business
- The full value of Microsoft 365 is based in the integration of the apps
- Take advantage of the “low hanging fruit” opportunities throughout the Microsoft 365 ecosystem of apps

Questions ?



Thank you!!!

Let's connect on LinkedIn →





**Wisconsin Institute of
Certified Public Accountants**

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AI-Powered Excel: Transforming Workflows With Copilot

Developed by Bryan L. Smith, CPA.CITP, CISA

In Waukesha, WI on December 4, 2025, 10:55am-12:10pm



Bryan L. Smith, CPA.CITP, CISA

- Owner DataSmithPro, LLC
- Co-founder of CPA Crossings, LLC
- Strategic technology advisor to CPAs w/ 40+ years of experience
- Nationally recognized author and presenter on CPA technology
- Extensive knowledge and experience in proper Excel design techniques as well as helping CPAs build spreadsheets that are accurate
- As a Certified Information Systems Auditor (CISA), spent a considerable amount of time auditing and validating thousands of Excel spreadsheets
- Developed various data analysis and Microsoft Power BI courses and has worked with multiple organizations to train and coach staff on proper data analysis techniques
- Masters of Science in Information Assurance (MSIA)

Presentation Outline

Click links to navigate to
specific section ----- >



- [Introduction to Copilot in Excel](#)
- [Copilot to Learn Excel](#)
- [Copilot with Formulas](#)
- [Copilot to Enhance Productivity](#)
- [Copilot to Analyze Data](#)
- [Copilot to Automate Repetitive Tasks](#)
- [Wrap-Up](#)

The slides in this presentation contain many screenshots of Excel and Copilot in order to demonstrate particular features and functionality.

These screenshots were taken during the development of this course. However, Microsoft updates the apps regularly and it becomes difficult to constantly update the screenshots. Therefore, please note that screenshots may vary from your actual version, but the overall functionality remains the same.

Note About Screen Shots

Introduction to Copilot in Excel





What is Copilot?

AI-powered assistant built on OpenAI's GPT models

- Fine-tuned for Microsoft applications

Uses Natural Language Processing (NLP)

- Interprets user commands and generates contextual responses

Integrates with Microsoft Ecosystem

- Microsoft 365 (M365) apps (Word, Excel, Outlook, PowerPoint, Teams)
- Windows 11 (system-wide AI-powered assistance)
- Power Automate and Power BI (workflow automation & data visualization)

How Does Copilot Work?

Type question or command into prompt

- In MS365 apps
- In Windows App
- In Web at copilot.microsoft.com

Passes to OpenAI's LLM (Large Language Model)

- Currently GPT-5 (but will upgrade to new model over time)

LLM process and formulates an answer

- Generates a human-like response
- User asks clarification questions & the conversation continues

How Does Copilot Help?

Word

- Write documents by suggesting text or summarizing long reports

Excel

- Analyze your data and create charts automatically

Outlook

- Draft emails and summarize long email thread

Windows

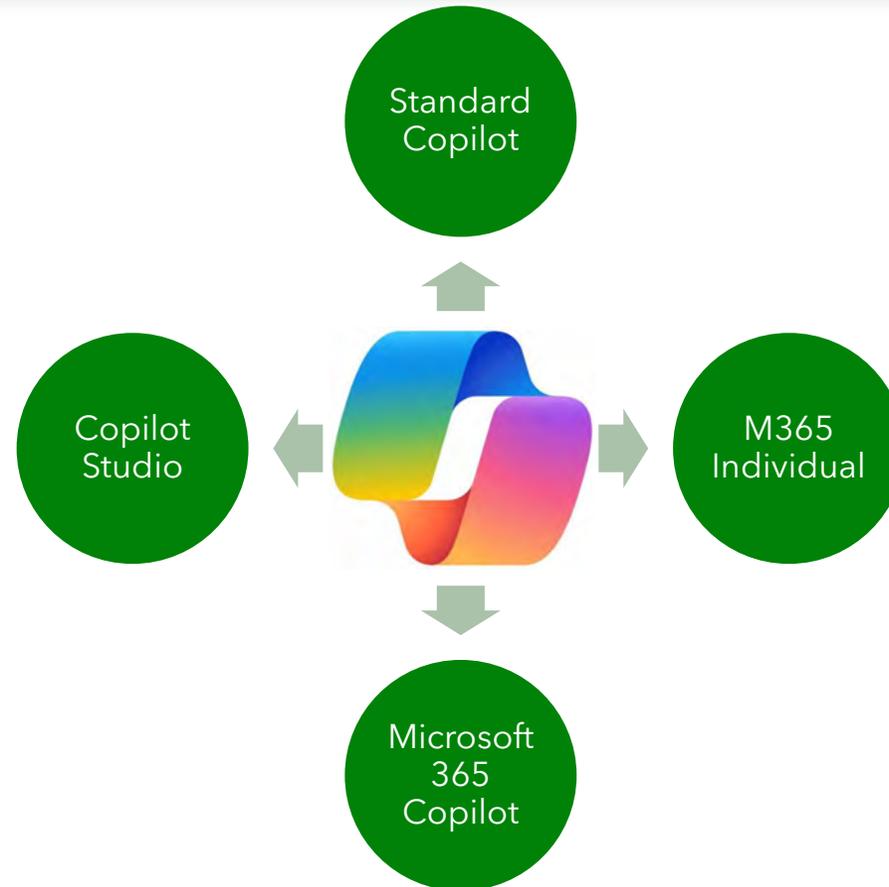
- Answer questions, adjust settings, or help with tasks

Browser

- Answer questions about almost any topic



Which Copilot Plan is Right for You?





Standard Copilot

Free

Accessed on the web, in Windows, macOS, & iPadOS

Uses the "chat" concept

Limited integration to M365 apps

Best for the casual user

Accessing Standard Copilot

The screenshot shows the Microsoft Copilot web interface. The browser address bar displays <https://copilot.microsoft.com/>. The main content area features a large text prompt: "Hey Bryan, what's on your mind today?". Below this is a text input field labeled "Message Copilot" with a "Quick response" dropdown menu. A row of buttons offers various tasks: "Write a first draft", "Get advice", "Learn something new", "Create an image", "Make a plan", "Brainstorm ideas", "Practice a language", and "Take a quiz". On the right side, a "Chat" panel is visible, containing the Copilot logo, a "Create a summary" card (with subtext "Summarize the main points on this page."), an "Understand the main points" card (with subtext "List key points from file"), and a "Get calendar info" card (with subtext "When's my next meeting with person?"). A "View prompts" link is also present. The bottom of the page includes a disclaimer: "Copilot may make mistakes. Your conversations are personalized and help train AI. Opt out."

Go to Copilot.com

-OR- Select Copilot icon

Type question or select card

Type question or select card



Microsoft 365 Individual Subscriptions - Copilot Availability

Personal

- Available in desktop apps
- Higher usage limits than free

Family

- Available in desktop apps only for the subscription owner
- Higher usage limits than free

Premium

- Available in desktop apps only for the subscription owner
- Higher usage limits than Personal and Family
- Access to Copilot features currently exclusive to Premium subscribers



Microsoft 365 Copilot

License for \$30/user/month, paid yearly

Everything in Copilot Premium

Requires a M365 Business Standard or Premium license

Integration with desktop versions of M365 apps

Collaboration within your organization

Best for business users

Accessing Copilot in Desktop Version of M365

Use Copilot icon > Suggest a Formula Column

Item	Quantity	Unit Price	Total Sales
Laptop	5	1000	
Tablet	10	500	
Smartphone	15	700	
Monitor	20	200	
Keyboard	25	50	
Mouse	12	30	
Printer	30	300	
Desk	18	150	
Chair	22	100	
Headphones	27	80	
Router	8	120	
USB Drive	14	25	
External HDD	10	150	
Webcam	9	90	
Gaming Mouse	16	60	

Generate a formula to calculate total sales by multiplying quantity and unit price

Item	Quantity	Unit Price
Laptop	5	1000
Tablet	10	500
Smartphone	15	700
Monitor	20	200
Keyboard	25	50
Mouse	12	30
Printer	30	300

Questions asked during Automatically Generate Formulas section:

1. Use Copilot icon > Suggest a Formula Column
2. Generate a formula to calculate total sales by multiplying quantity and unit price
3. Create a total for the total sales column

Copilot sidebar options:

- Create formulas
Suggest a formula column
- Understand
Summarize using PivotTables or charts
- Advanced analysis
Get deeper analysis results using

Search for content, ask a question, or type a prompt to get me what you'd like to do with A2:C17

Select Copilot icon

Type question or select card

Accessing Copilot in Web Version of M365

Access M365 Web app & open document

Copilot | Microsoft 365 Copilot x Home | Microsoft 365 Copilot x Excel | Microsoft 365 Copilot x OxLS119W2_PM01_CopilotInExcel x

https://datasmithpro-my.sharepoint.com/:x:/r/personal/bsmith_datasmithpro_com/_layouts/15/doc2.aspx?sourcedoc=%...

OxLS119W2_PM01_CopilotInExcel_v2503_1

File Home Insert Share Page Layout Formulas Data Review

Clean Data with Copilot Copilot has 2 suggestions to clean your data in sheet CleanData

A1

Questions asked during Copilot to Learn Excel section:

Product	Price	Stock
Apple	1	100
Banana	0.5	150
Orange	0.75	200
Mango	1.5	50

Chat

Copilot

Create a summary

Summarize the main points on this page.

Understand the main points

List key points from file

Get calendar info

When's my next meeting with person ?

View prompts

Message Copilot

Select Copilot icon

Type question or select card



Copilot Studio

License for \$200/month

Create & build your own, unique Copilot

- A low-code, end-to-end conversational AI platform
- Allows you to build and customize “copilots”

Customize Copilot for M365 (Copilot for Microsoft 365 required)

Access generative AI plugins to enhance copilot outputs

Best for those who want a custom Copilot experience

Best Practices for Using Copilot in Excel

Be VERY specific when asking your questions

NEVER trust the response

- Use it for training
- Be prepared to edit the response
- Validate EVERY response to confirm it is correct
- If response isn't correct continue clarifying chats

I have found Copilot works GREAT for MS apps

- Not so good for general questions (ChatGPT is WAY better)

Getting Started Using Copilot in Excel

Autosave ON

- Which means file must be saved to OneDrive or SharePoint

Use Excel Tables or "Table-Like Range"

Open the chat pane on Home tab

- Also, quick menu by clicking Copilot icon on selected cell
- Select a card or type a question

Accessing Copilot in Excel

Turn On Autosave

Select Copilot icon on cell

Type question here

Select Copilot to open chat pane

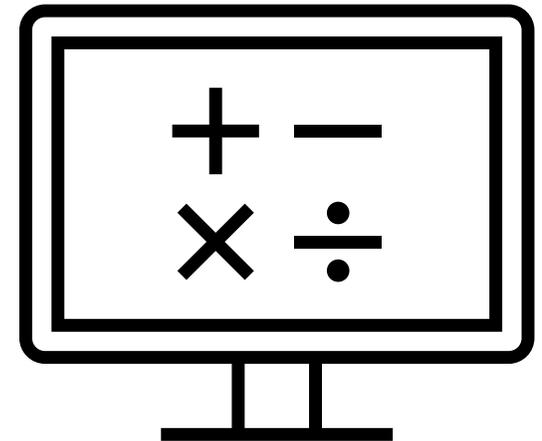
Suggested Copilot help

Use to help Copilot get better

F	G	H	I	J	K
Total					
\$2,309.23					
\$545.02					
\$59.85					
\$12,216.75					
\$1,749.50					
\$4,348.50					
\$2,363.90					
\$36,883.22					
\$30,883.87					
0					
4					
8					

- Get Deeper Analysis Results using Python
- fx Explain this Formula
- fx Suggest a Formula Column
- Suggest Conditional Formatting
- Summarize using PivotTable or Chart
- Teach Me Something About Excel
- Chat with Copilot
- Hide until I Reopen this Document

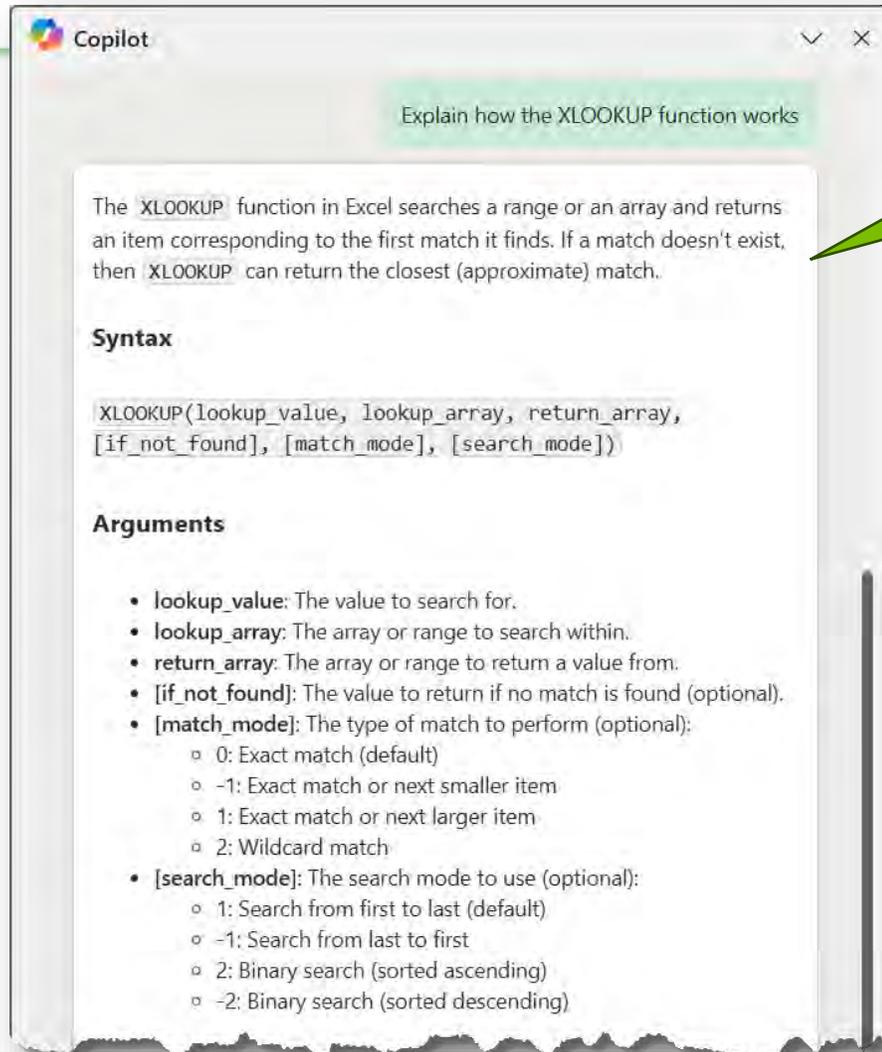
Copilot to Learn Excel



Use Copilot in Excel to Learn Excel

1. Explain a Function
2. Create Data to Use With a Formula
3. Explain How to Write a Formula
4. Ask for Keyboard Shortcuts
5. Explain a Concept (Absolute/Relative Reference)
6. Explain a Feature (PivotTable)

1. Explain a Function



Copilot

Explain how the XLOOKUP function works

The `XLOOKUP` function in Excel searches a range or an array and returns an item corresponding to the first match it finds. If a match doesn't exist, then `XLOOKUP` can return the closest (approximate) match.

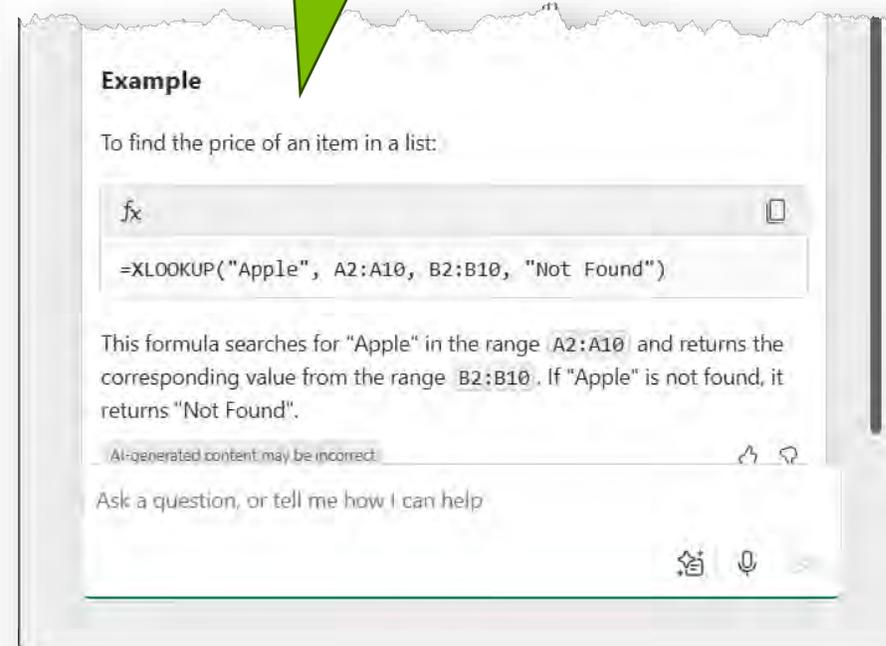
Syntax

```
XLOOKUP(lookup_value, lookup_array, return_array, [if_not_found], [match_mode], [search_mode])
```

Arguments

- **lookup_value**: The value to search for.
- **lookup_array**: The array or range to search within.
- **return_array**: The array or range to return a value from.
- **[if_not_found]**: The value to return if no match is found (optional).
- **[match_mode]**: The type of match to perform (optional):
 - 0: Exact match (default)
 - -1: Exact match or next smaller item
 - 1: Exact match or next larger item
 - 2: Wildcard match
- **[search_mode]**: The search mode to use (optional):
 - 1: Search from first to last (default)
 - -1: Search from last to first
 - 2: Binary search (sorted ascending)
 - -2: Binary search (sorted descending)

Very Microsoft
"Help-like" response



Example

To find the price of an item in a list:

```
fx
```

```
=XLOOKUP("Apple", A2:A10, B2:B10, "Not Found")
```

This formula searches for "Apple" in the range `A2:A10` and returns the corresponding value from the range `B2:B10`. If "Apple" is not found, it returns "Not Found".

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Ask a question, or tell me how I can help

Copilot vs. ChatGPT for General Questions

Copilot

Can you provide key points about how XLOOKUP works?

Sure, here are the key points about how the XLOOKUP function works:

- **Purpose:** Searches a range or array and returns an item corresponding to the first match it finds.
- **Syntax:**
`XLOOKUP(lookup_value, lookup_array, return_array, [if_not_found], [match_mode], [search_mode])`

Arguments:

- **lookup_value:** The value to search for.
- **lookup_array:** The array or range to search within.
- **return_array:** The array or range to return a value from.
- **[if_not_found]:** The value to return if no match is found (optional).
- **[match_mode]:** The type of match to perform (optional):
 - 0: Exact match (default)
 - -1: Exact match or next smaller item
 - 1: Exact match or next larger item
 - 2: Wildcard match
- **[search_mode]:** The search mode to use (optional):
 - 1: Search from first to last (default)
 - -1: Search from last to first
 - 2: Binary search (sorted ascending)
 - -2: Binary search (sorted descending)

• **Example:**

```
.fx  
=XLOOKUP("Apple", A2:A10, B2:B10, "Not Found")
```

This formula searches for "Apple" in the range A2:A10 and returns the corresponding value from the range B2:B10. If "Apple" is not found, it returns "Not Found".

Still "help-like"

Ask clarification question

ChatGPT

Can you provide key points about how XLOOKUP works

Key Points About How XLOOKUP Works

1. **Basic Functionality**
 - Searches for a **lookup value** in a specified range (**lookup_array**) and returns a corresponding value from another range (**return_array**).
2. **Flexible Lookup Direction**
 - Works for **both vertical and horizontal lookups**, unlike VLOOKUP and HLOOKUP.
 - Can search **left-to-right** or **right-to-left** (unlike VLOOKUP).
3. **Exact Match by Default**
 - No need to specify an exact match, unlike VLOOKUP, which defaults to an approximate match.
4. **Handles Missing Values**
 - The `[if_not_found]` argument allows returning a custom message instead of `#N/A`.
5. **Supports Approximate Matches**
 - Can find the next **smaller (-1)** or **larger (1)** match when exact values are unavailable.
6. **Wildcard Matching Available**
 - Allows searches using `*` (for any characters) and `?` (for a single character).
7. **Searches in Any Order**
 - Can search **top-to-bottom (1)** or **bottom-to-top (-1)**.
 - Can perform **binary search (2 or -2)** if data is sorted.

More natural language

2. Create Data to Use With a Formula

Copilot

To demonstrate how the XLOOKUP function works, follow these steps:

1. Add Business Data:
 - o Create a new worksheet.

Following business data:

Price	Stock
1.00	100
0.50	150
0.75	200
1.50	50

Find Data:

Price of a specific product, use the XLOOKUP

What you can do next

Manual Option

You can manually add a worksheet and copy the following sample data and formulas:

Step 1: Add a new worksheet

- Right-click any sheet tab, choose "Insert," and select "Worksheet."
- Rename it to XLOOKUP_Demo.

Step 2: Enter sample business data

SKU	Product
P-1001	Laptop 14"
P-1002	Laptop 16"
P-2001	Monitor 27"
P-2002	Monitor 34"

Ask to add data

	A	B	C	D	E
1	Product	Price	Stock		
2	Apple	1	100		0.5
3	Banana	0.5	150		200
4	Orange	0.75	200		
5	Mango	1.5	50		

+ Insert to new sheet

Step 3: Try these XLOOKUP formulas

- Find price by SKU:
 =XLOOKUP("P-2001", A2:A9, D2:D9, "SKU Not Found")
- Find product name by SKU:
 =XLOOKUP("P-2001", A2:A9, B2:B9, "SKU Not Found")
- Find stock by product name:
 =XLOOKUP("Monitor 34" UW", B2:B9, E2:E9, "Product Not Found")

Try Other Functions

SWITCH

LET

IFS

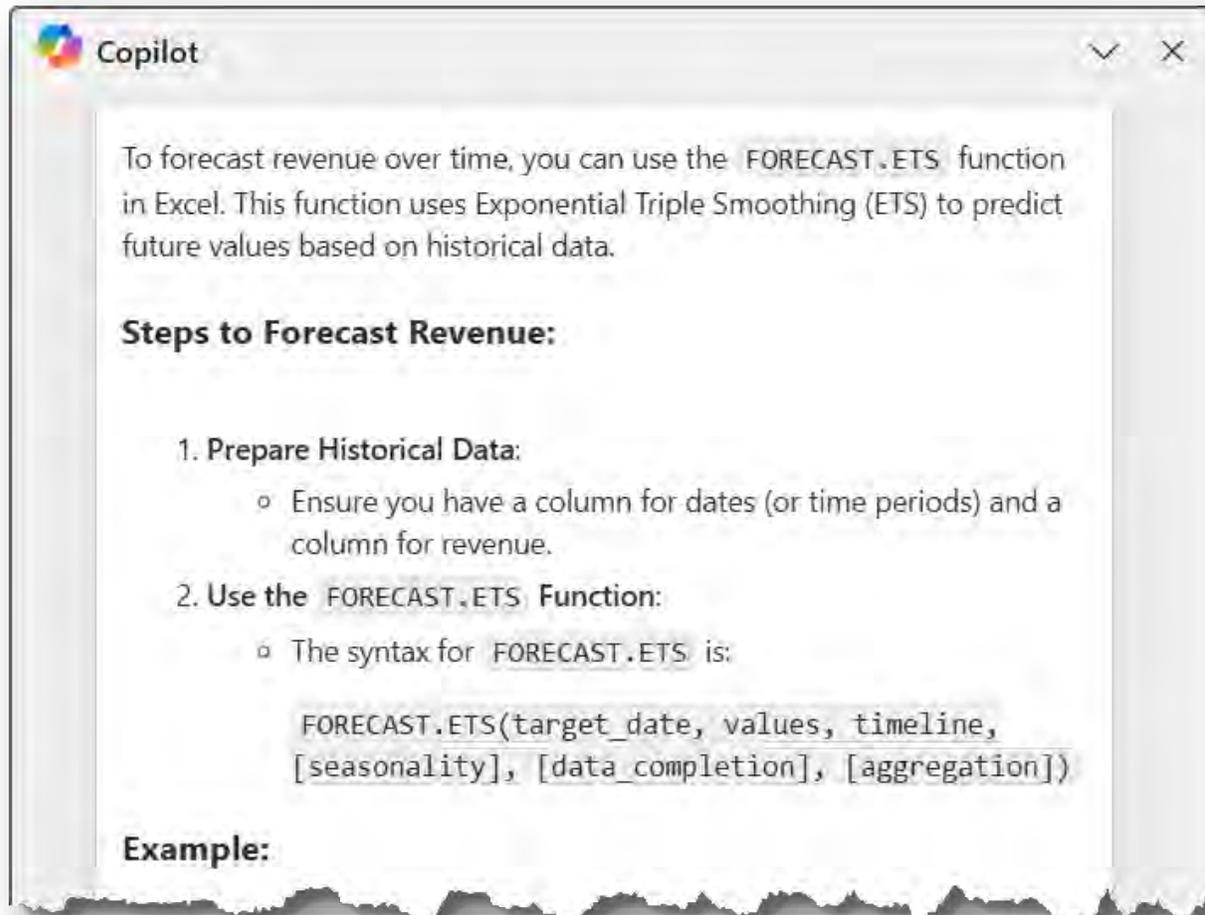
SUMIF / SUMIFS

FILTER

UNIQUE

3. Explain How to Write a Formula

How can I write a formula that forecasts revenue over time



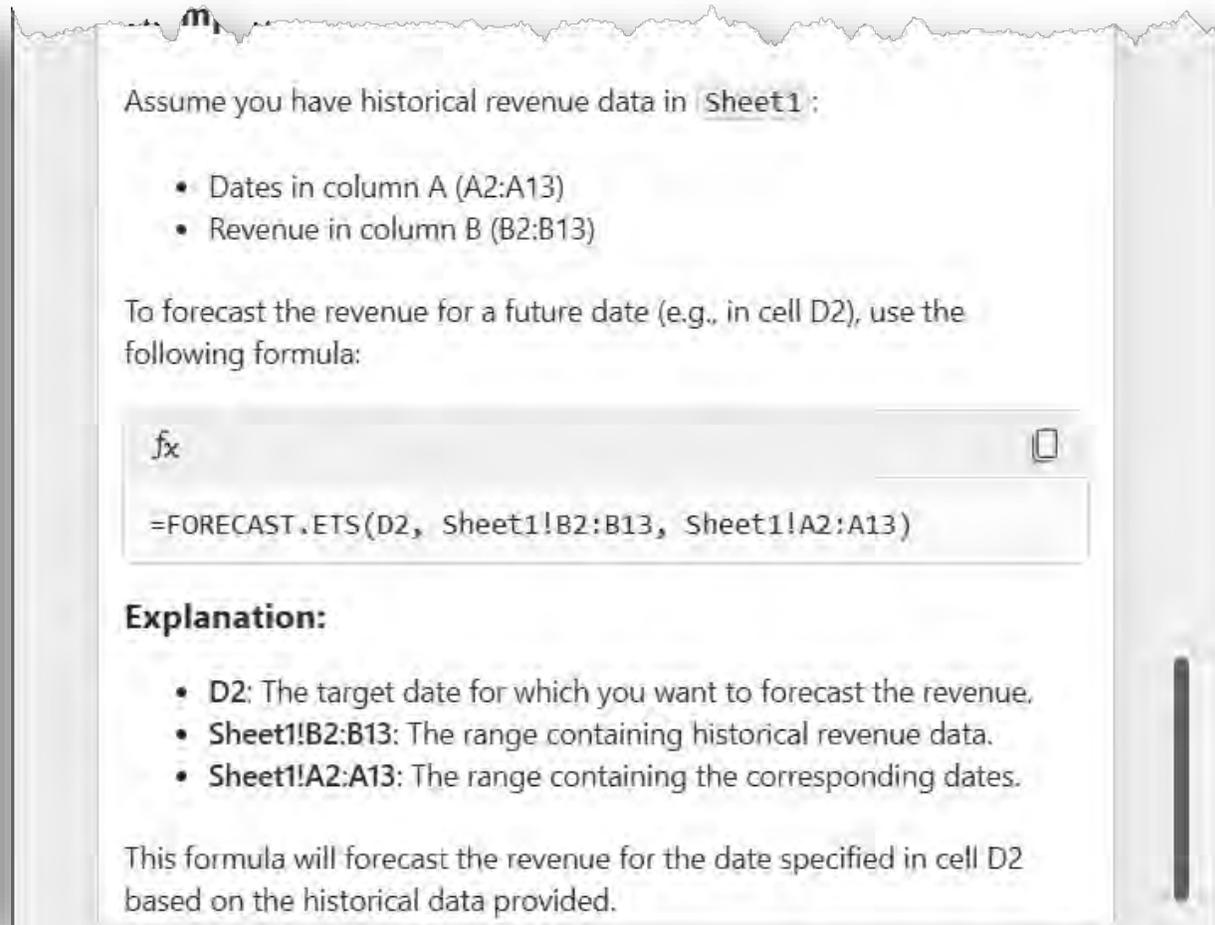
Copilot

To forecast revenue over time, you can use the `FORECAST.ETS` function in Excel. This function uses Exponential Triple Smoothing (ETS) to predict future values based on historical data.

Steps to Forecast Revenue:

- 1. Prepare Historical Data:**
 - Ensure you have a column for dates (or time periods) and a column for revenue.
- 2. Use the `FORECAST.ETS` Function:**
 - The syntax for `FORECAST.ETS` is:
`FORECAST.ETS(target_date, values, timeline, [seasonality], [data_completion], [aggregation])`

Example:



Assume you have historical revenue data in `Sheet1`:

- Dates in column A (`A2:A13`)
- Revenue in column B (`B2:B13`)

To forecast the revenue for a future date (e.g., in cell `D2`), use the following formula:

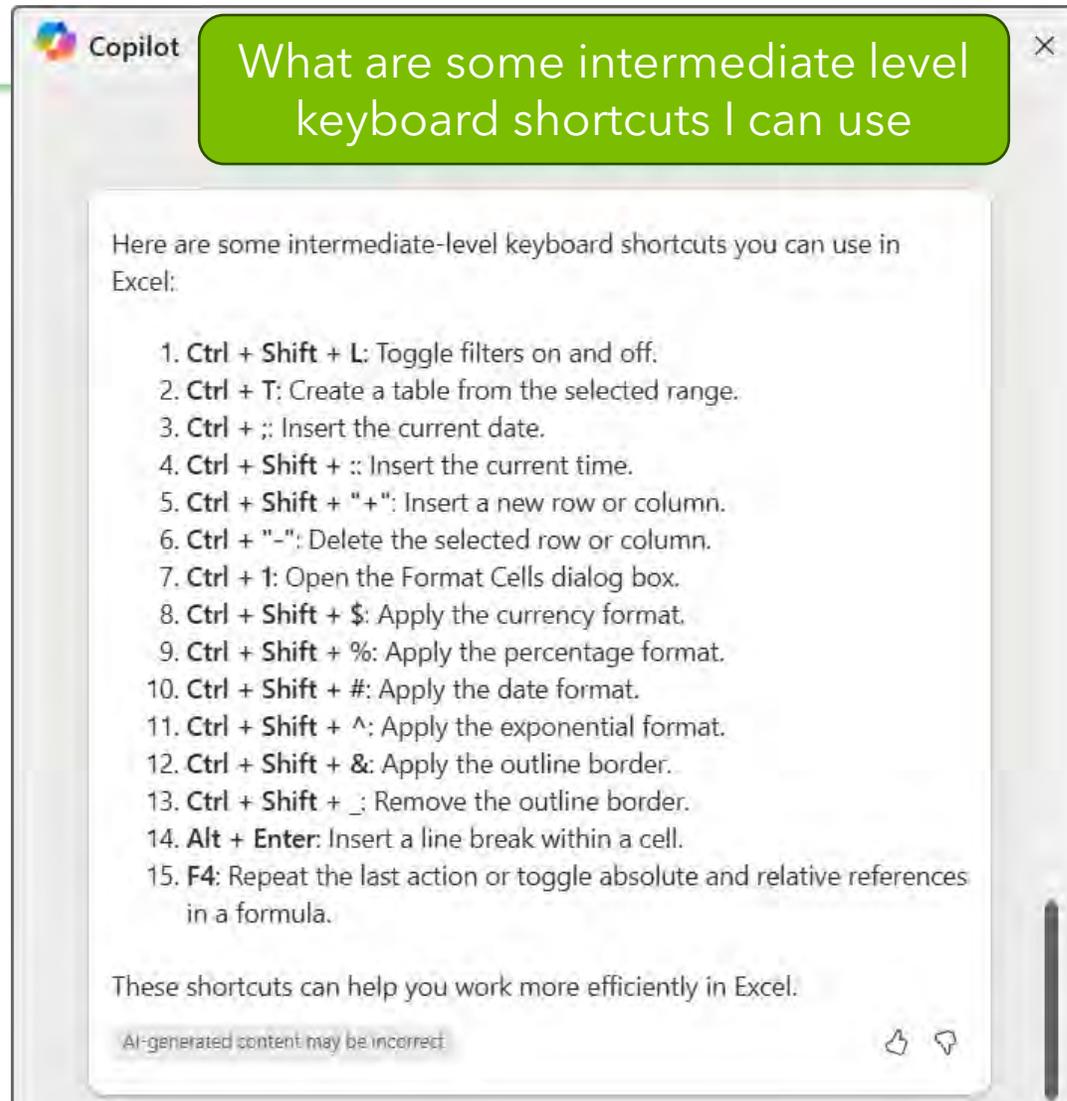
```
=FORECAST.ETS(D2, Sheet1!B2:B13, Sheet1!A2:A13)
```

Explanation:

- `D2`: The target date for which you want to forecast the revenue.
- `Sheet1!B2:B13`: The range containing historical revenue data.
- `Sheet1!A2:A13`: The range containing the corresponding dates.

This formula will forecast the revenue for the date specified in cell `D2` based on the historical data provided.

4. Ask for Keyboard Shortcuts



Copilot

What are some intermediate level keyboard shortcuts I can use

Here are some intermediate-level keyboard shortcuts you can use in Excel:

1. **Ctrl + Shift + L**: Toggle filters on and off.
2. **Ctrl + T**: Create a table from the selected range.
3. **Ctrl + ;**: Insert the current date.
4. **Ctrl + Shift + ;**: Insert the current time.
5. **Ctrl + Shift + "+"**: Insert a new row or column.
6. **Ctrl + "-"**: Delete the selected row or column.
7. **Ctrl + 1**: Open the Format Cells dialog box.
8. **Ctrl + Shift + \$**: Apply the currency format.
9. **Ctrl + Shift + %**: Apply the percentage format.
10. **Ctrl + Shift + #**: Apply the date format.
11. **Ctrl + Shift + ^**: Apply the exponential format.
12. **Ctrl + Shift + &**: Apply the outline border.
13. **Ctrl + Shift + _**: Remove the outline border.
14. **Alt + Enter**: Insert a line break within a cell.
15. **F4**: Repeat the last action or toggle absolute and relative references in a formula.

These shortcuts can help you work more efficiently in Excel.

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👍 👎

5. Explain a Concept (Absolute/Relative Reference)

What is the difference between absolute and relative references

In Excel, the difference between absolute and relative references lies in how the cell references adjust when you copy a formula to another cell.

Relative References

- **Definition:** Adjust based on the relative position of the cell where the formula is copied.
- **Example:** If you have a formula `=A1+B1` in cell C1 and you copy it to cell C2, it will adjust to `=A2+B2`.

Absolute References

- **Definition:** Remain constant, regardless of where the formula is copied.
- **Example:** If you have a formula `=A1+B1` in cell C1 and you copy it to cell C2, it will remain `=A1+B1`.

Mixed References

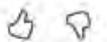
- **Definition:** Combine absolute and relative references.
- **Example:** If you have a formula `=$A1+B$1` in cell C1 and you copy it to cell C2, it will adjust to `=$A2+B$1`.

Usage

- **Relative:** Use when you want the formula to adjust based on its new location.
- **Absolute:** Use when you want to lock a specific cell reference in the formula.

You can toggle between these reference types by pressing `F4` while editing a formula.

AI-generated content may be incorrect.



6. Explain a Feature (PivotTable)

What is a PivotTable and How can I use it

A PivotTable is a powerful tool in Excel that allows you to summarize, analyze, explore, and present large amounts of data. It enables you to transform data into meaningful insights by grouping and aggregating data based on different criteria.

How to Create and Use a PivotTable:

1. Select Your Data:

- Ensure your data is organized in a table with headers.

2. Insert a PivotTable:

- Go to the `Insert` tab on the Ribbon.
- Click on `PivotTable`.
- In the `Create PivotTable` dialog box, select the range of your data and choose where you want the PivotTable to be placed (new worksheet or existing worksheet).

3. Build Your PivotTable:

- In the PivotTable Field List, drag fields to the following areas:
 - **Rows:** Fields you want to display as rows.
 - **Columns:** Fields you want to display as columns.
 - **Values:** Fields you want to aggregate (e.g., sum, average).
 - **Filters:** Fields you want to use to filter the data.

Example:

Assume you have the following data in `Table1`:

Product	Price	Stock
Apple	1.00	100
Banana	0.50	150
Orange	0.75	200
Mango	1.50	50

To create a PivotTable that summarizes the total stock for each product:

1. Select the Data:

- Select the range `Table1`.

2. Insert the PivotTable:

- Go to `Insert > PivotTable`.
- Select `Table1` as the data range.
- Choose to place the PivotTable in a new worksheet.

3. Build the PivotTable:

- Drag the `Product` field to the `Rows` area.
- Drag the `Stock` field to the `Values` area.

This will create a PivotTable that shows the total stock for each product. You can further customize the PivotTable by adding more fields, changing the aggregation function, and applying filters.

The List is *Almost* Infinite

How can I add a Keyboard Shortcut to the Quick Access toolbar?

What are Themes and how do you use them?

Explain how to use the currencies data type

Review Chat History or Start New Chat

The image shows a screenshot of the M365 Copilot interface. On the left, a navigation panel is open, displaying a list of chat history items. A red box highlights the 'All conversations' link at the bottom of this list. A red arrow points from this link to the right-hand side of the image, which shows a detailed view of the chat history. This view includes a search bar at the top, a filter menu with 'All', 'Agents', and 'Pages' options, and a list of chat entries under the heading 'Today'. Each entry shows the chat title and a snippet of the user's question. A red arrow points from the 'All conversations' link to the search bar area. Green callout boxes provide instructions: 'Open navigation panel' points to the hamburger menu icon; 'New Chat' points to the plus icon in the top bar; 'Displays ALL Copilot chat history' points to the 'All conversations' link; 'Older chats with search' points to the search bar; and 'Hover over to delete' points to a chat entry in the list.

New Chat

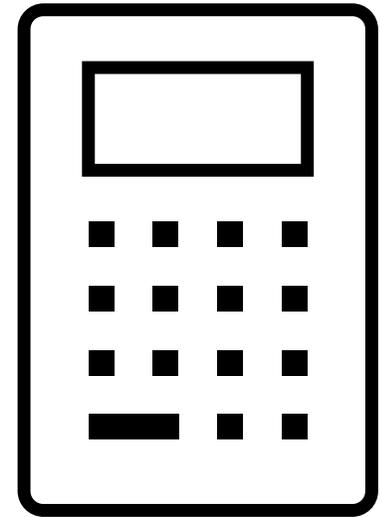
Open navigation panel

Displays ALL Copilot chat history

Older chats with search

Hover over to delete

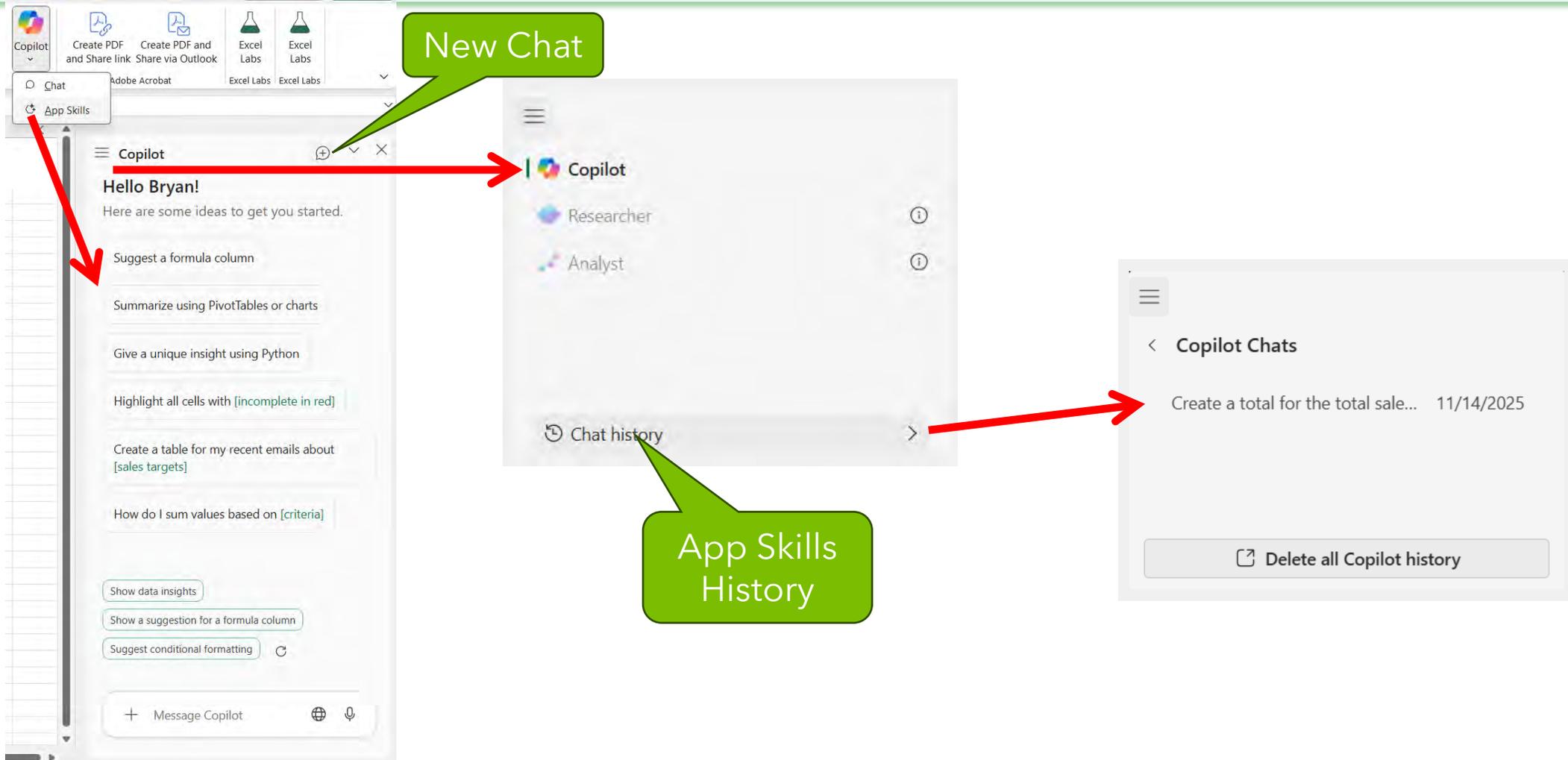
Copilot with Formulas



Use Copilot in Excel with Formulas

1. Automatically Generate Formulas
2. Create Complex Formulas
3. Explain a Formula
4. Debug a Formula

Using Copilot App Skills for Just this Workbook



1. Automatically Generate Formulas

	A	B	C	D	E	F	G
1	Item	Quantity	Unit Price	!Sales			Questions ask
2	Laptop	5	1000				
3	Tablet	10	500				
4	Smartphone	15	700				
5	Monitor	20	200				
6	Keyboard	25	50				
7	Mouse	12	30				
8	Printer	30	300				
9	Desk	18	150				
10	Chair	22	100				
11	Headphones	27	80				
12	Router	8	120				
13	USB Drive	14	25				
14	External HDD	10	150				
15	Webcam	9	90				
16	Gaming Mouse	16	60				

- Get Deeper Analysis Results using Python
- fx Explain this Formula
- fx Suggest a Formula Column**
- Suggest Conditional Formatting
- Summarize using PivotTable or Chart
- Teach Me Something About Excel
- Ask Copilot
- Hide until I Reopen this Document

Looking at A1:C16, here's 1 formula column to review and insert in Column D:

Total Price

Calculates the total price for each item by multiplying the quantity by the unit price.

fx

=B2*\$C2

Show explanation

1

2

3

4 \$10,500

5 \$4,000

...

+

Insert column

AI-generated content may be incorrect

Give me another column suggestion

Hover over to preview

	A	B	C	D
1	Item	Quantity	Unit Price	Total Price
2	Laptop	5	1000	\$5,000.00
3	Tablet	10	500	\$5,000.00
4	Smartphone	15	700	\$10,500.00
5	Monitor	20	200	\$4,000.00
6	Keyboard	25	50	\$1,250.00
7	Mouse	12	30	\$360.00
8	Printer	30	300	\$9,000.00
9	Desk	18	150	\$2,700.00
10	Chair	22	100	\$2,200.00
11	Headphones	27	80	\$2,160.00
12	Router	8	120	\$960.00
13	USB Drive	14	25	\$350.00
14	External HDD	10	150	\$1,500.00
15	Webcam	9	90	\$810.00
16	Gaming Mouse	16	60	\$960.00

	Total Price	Total Sales
...		

Pushes existing columns over

fx

=PRODUCT(\$B21, \$C21)

Show explanation

Create Total Row

Create a total for the total sales column

Total sales: \$46,750.00

Looking at A20:D35, here's 1 formula to review and insert in row 36:

fx

=SUM(D\$21:D\$35)

Show explanation

Calculates the total sales for all items in the table.

	A	D
20	Item	Total Sales
21	Laptop	\$5,000.00
22	Tablet	\$5,000.00
23	Smartphone	\$10,500.00
...
36	Total	\$46,750.00

+ Insert row

External HDD	10	150	\$1,500.00
Webcam	9	90	\$810.00
Gaming Mouse	16	60	\$960.00
Total			\$46,750.00

2. Create Complex Formulas: Simple Split Text

Customer Name
John Doe
Alice Smith
Emma Johnson
Harry White

Suggest a Formula Column

Looking at A2:A6, here's 1 formula column to review and insert in Column B:

First name

Extracts the first name of each customer by taking the text before the first space in their full name.

```
fx  
=TEXTBEFORE([@[Customer Name]], " ")
```

Show explanation

	B
2	First name
3	John
4	Alice
5	Emma
6	Harry

+ Insert column

Customer Name	First name	Last name
John Doe	John	Doe
Alice Smith	Alice	Smith
Emma Johnson	Emma	Johnson
Harry White	Harry	White

Now create the last name column

Looking at A2:B6, here's 1 formula column to review and insert in Column C:

Last name

Extracts the last name of each customer by taking the text that appears after the first space in their full name.

```
fx  
=TEXTAFTER([@[Customer Name]], " ")
```

Show explanation

2. Create Complex Formulas: Complex Split Text #1

Customer Name
John J. Doe
Alice M. Smith
Emma M. Johnson
Harry White

Suggest a Formula Column

Looking at A9:A13, here's 1 formula column to review and insert in Column B:

First name

Extracts the first name of each customer by taking the text before the first space in their full name.

```
fx =TEXTBEFORE([@[Customer Name]], " ")
```

	B
9	First name
10	John
11	Alice
12	Emma
13	Harry

+ Insert column

Create a middle initial column

Looking at A9:B13, here's 1 formula column to review and insert in Column C:

Middle initial

Extracts the middle initial from the "Customer Name" by finding the first character after the first space. If no middle initial is found, it returns an empty string.

```
fx =IFERROR(LEFT(TEXTAFTER([@[Customer Name]], " "),1), "")
```

	C
9	Middle initial
10	J
11	M
12	M
13	W

Some Customer Name do not have a middle initial, so it should be blank

Looking at A9:B13, here's 1 formula column to review and insert in Column C:

Middle Initial

Extracts the middle initial from the "Customer Name" by splitting the name into parts and taking the first letter of the second part if it exists. If there is no middle initial, it leaves the cell blank.

```
fx =LET(parts, TEXTSPLIT([@[Customer Name]], " ",, TRUE), IF(COLUMNS(parts) > 2, LEFT(TRIMEX(parts, 1, 2), 1))
```

	C
9	Middle Initial
10	J
11	M
12	M
13	

2. Create Complex Formulas: Complex Split Text #2

Customer Name
John James Doe
Alice M. Smith
Emma M. Johnson
Harry

Split the Customer Name column into First, Middle and Last Name, where middle name may be a full name or a middle initial with a period or a middle initial without a period or no middle initial. Plus some names do not have a middle initial or last name.

Customer Name	First Name	Middle Name	Last Name
John James Doe	John	James	Doe
Alice M. Smith	Alice	M.	Smith
Emma M Johnson	Emma	M	Johnson
Harry	Harry		

2. Create Complex Formulas: Complex Split Text #3

Customer Name
John James Doe, Jr.
Alice M. Smith
Emma M Johnson
Harry

Split the Customer Name column into First, Middle, Last Name and suffix, where middle name may be a full name or a middle initial with a period or a middle initial without a period or no middle initial. Plus some names do not have a middle initial or last name and some names have a suffix which is after the comma.

Customer Name	First Name	Middle Name	Last Name	Suffix
John James Doe, Jr.	John	James	Doe	Jr.
Alice M. Smith	Alice	M.	Smith	
Emma M Johnson	Emma	M	Johnson	
Harry	Harry			

2. Create Complex Formulas: Find Top 5 Highest Sales

Item	Quantity	Unit Price	Total Sales
Laptop	5	\$1,000	\$5,000
Tablet	10	\$500	\$5,000
Smartphor	15	\$700	\$10,500
Monitor	20	\$200	\$4,000
Keyboard	25	\$50	\$1,250
Mouse	12	\$30	\$360
Printer	30	\$300	\$9,000
Desk	18	\$150	\$2,700
Chair	22	\$100	\$2,200
Headphon	27	\$80	\$2,160
Router	8	\$120	\$960
USB Drive	14	\$25	\$350
External HI	10	\$150	\$1,500
Webcam	9	\$90	\$810
Gaming Mc	16	\$60	\$960

Find the top 5 highest sales

I analyzed data in A2:D17, and here's what I found:

Top 5 in 'Item' by 'Total Sales'

Item	Sum of Total Sales
Smartphone	\$10,500
Printer	\$9,000
Laptop	\$5,000
Tablet	\$5,000
Monitor	\$4,000
Grand Total	\$33,500

+ Add to a new sheet

AI-generated content may be incorrect

Creates a PivotTable

Item	Max of Total Sales
Smartphone	\$10,500
Printer	\$9,000
Laptop	\$5,000
Tablet	\$5,000
Monitor	\$4,000
Grand Total	\$10,500

2. Create Complex Formulas: Find Top 5 Highest Sales with Input Field

Find the top "X" highest sales where there is an input cell for X, add the results starting at cell G11 and input cell at F11

To find the top "X" highest sales, where "X" is specified in cell F11, and display the results starting at cell G11, you can use the following formula:

- 1. In cell G11, enter the following formula to get the top "X" highest sales:

```
fx
=LET(
  sales, Table13[Total Sales],
  items, Table13[Item],
  x, F11,
  sortedSales, SORTBY(sales, sales
```

This formula will sort the sales in descending order and then extract the top "X" sales along with their corresponding items. The results will be displayed starting at cell G11.

AI-generated content may be incorrect

Sometimes the formula is incorrect and errors

Had to keep asking questions to get this corrected

Copilot Final Results (after initial question and 8 clarifying questions):

```
=LET(
  sortedData, SORTBY(Table133, Table133[Total Sales], -1),
  topX, F11,
  FILTER(sortedData, SEQUENCE(ROWS(sortedData)) <= topX)
)
```

5	Smartpho	15	700	10500
	Printer	30	300	9000
	Laptop	5	1000	5000
	Tablet	10	500	5000
	Monitor	20	200	4000

3. Explain a Formula

Explain the formula in E2

I don't have access to the specific formula in cell E2. Could you please provide the formula so I can explain it to you?

AI-generated content may be incorrect



Explain the formula
`=XLOOKUP(D2, A2:A6, B2:B6, "Product Not Found", 0, 1)`

Simple

Copilot

The formula `=XLOOKUP(D2, A2:A6, B2:B6, "Product Not Found", 0, 1)` searches for a value in a specified range and returns a corresponding value from another range. Here's a breakdown of what it does:

- `D2`: The value to search for.
- `A2:A6`: The range to search within.
- `B2:B6`: The range to return a value from if the search value is found.
- `"Product Not Found"`: The value to return if the search value is not found.
- `0`: Specifies an exact match is required.
- `1`: Specifies the search mode, where `1` means search from first to last.

In summary, this formula looks for the value in cell `D2` within the range `A2:A6`. If it finds an exact match, it returns the corresponding value from the range `B2:B6`. If no match is found, it returns "Product Not Found". The search is conducted from the first to the last item in the range.

Copilot

Explain what this Excel formula is doing `=IF(ROWS(F11:F22)-SUMPRODUCT(--ISFORMULA(F11:F22))<>0,"Missing Formula","OK")`

The formula `=IF(ROWS(F11:F22)-SUMPRODUCT(--ISFORMULA(F11:F22))<>0,"Missing Formula","OK")` checks if all cells in the range `F11:F22` contain formulas. Here's a breakdown of what it does:

- `ROWS(F11:F22)`: Counts the number of rows in the range `F11:F22`, which is 12.
- `ISFORMULA(F11:F22)`: Checks each cell in the range `F11:F22` to see if it contains a formula, returning an array of TRUE or FALSE values.
- `--ISFORMULA(F11:F22)`: Converts the TRUE or FALSE values to 1 or 0, respectively.
- `SUMPRODUCT(--ISFORMULA(F11:F22))`: Sums the array of 1s and 0s, giving the count of cells that contain formulas.
- `ROWS(F11:F22) - SUMPRODUCT(--ISFORMULA(F11:F22))`: Calculates the difference between the total number of rows and the number of cells containing formulas.
- `IF(ROWS(F11:F22)-SUMPRODUCT(--ISFORMULA(F11:F22))<>0,"Missing Formula","OK")`: Checks if the difference is not equal to 0. If it is not 0, it means there are cells without formulas, and it returns "Missing Formula". If it is 0, it means all cells contain formulas, and it returns "OK".

Complex

4. Debug a Formula

Copilot

What is wrong with this Excel formula =XLOOKUP(D4, A2:A6, B3:B5, "Product Not Found", 0, 1)

The issue with the formula =XLOOKUP(D4, A2:A6, B3:B5, "Product Not Found", 0, 1) is that the lookup array A2:A6 and the return array B3:B5 are not of the same size. The lookup array has 5 rows, while the return array has only 3 rows. Both arrays must have the same number of rows for the XLOOKUP function to work correctly.

Here is the corrected formula assuming the return array should also be B2:B6:

fx

=XLOOKUP(D4, A2:A6, B2:B6, "Product Not Found", 0, 1)

Arrays MUST be of the SAME size and they are not

Suggests solution

Copilot

What is wrong with this Excel formula =XLOOKUP(D6, A2:A6)

The formula =XLOOKUP(D6, A2:A6) is incomplete. The XLOOKUP function requires at least three arguments: the lookup value, the lookup array, and the return array.

Here is the correct syntax for the XLOOKUP function:

XLOOKUP(lookup_value, lookup_array, return_array, [if_not_found], [match_mode], [search_mode])

To fix the formula, you need to specify the return array. For example, if you want to return values from the range B2:B6, the corrected formula would be:

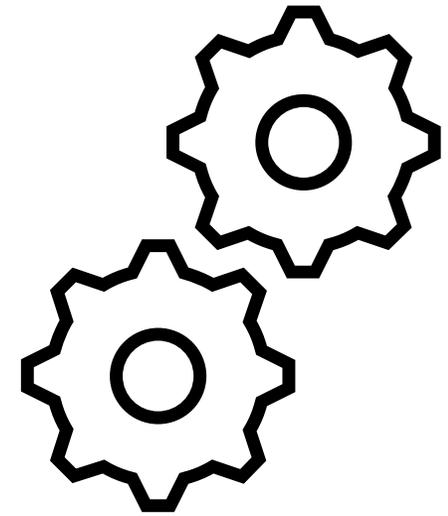
fx

=XLOOKUP(D6, A2:A6, B2:B6)

Formula is incomplete

Suggests solution

Copilot to Enhance Productivity



Use Copilot in Excel to Enhance Productivity

1. Conditional Formatting
2. Clean and Format Data

1. Conditional Formatting #1

The screenshot shows the Copilot chat interface in Excel. The chat history includes a prompt: "Show a suggestion for a formula column" and a response: "Suggest conditional formatting". The Copilot chat window displays several suggestions for conditional formatting for data in A2:B17:

- Highlight cells in 'Product' when 'Sales' cells are greater than 10,000
- Highlight cells above average in column 'Sales'
- Add a gradient Data Bar to 'Sales' column
- Highlight cells less than 8,500 in column 'Sales'
- Highlight rows when cells begin with 'M' in column 'Product'

A green callout bubble points to the first suggestion with the text: "If you like one of the suggestions, click it".

The Copilot chat window also shows a detailed view of the selected suggestion: "Highlight cells in 'Product' when 'Sales' cells are greater than 10,000". It includes a "Custom Formula" section with the formula `=B3 > 10000` and a preview of the formatting: yellow fill color and black font color.

On the right, a table displays the product sales data:

Product	Sales
Laptop	\$12,000
Tablet	\$8,500
Smartphone	\$15,000
Monitor	\$6,000
Keyboard	\$4,000
Mouse	\$3,000
Printer	\$7,000
Desk	\$9,000
Chair	\$5,000
Headphones	\$6,500
Router	\$7,200
USB Drive	\$2,500
External HDD	\$4,800
Webcam	\$3,100
Gaming Mouse	\$8,000

1. Conditional Formatting #2

Copilot

Highlight sales below \$5,000 in red

Sure! Looking at **A2:B17**, here's 1 conditional formatting rule to review and apply:

- **Cell value less than 5000:** Apply the following to cells in the column "Sales"
 - Fill color: red
 - Font color: black

AaBbCc

Apply

Product	Sales
Laptop	\$12,000
Tablet	\$8,500
Smartphone	\$15,000
Monitor	\$6,000
Keyboard	\$4,000
Mouse	\$3,000
Printer	\$7,000
Desk	\$9,000
Chair	\$5,000
Headphones	\$6,500
Router	\$7,200
USB Drive	\$2,500
External HDD	\$4,800
Webcam	\$3,100
Gaming Mouse	\$8,000

Copilot

Apply conditional formatting to show top 25% of sales in dark green and font in white

Sure! Looking at **A2:B17**, here's 1 conditional formatting rule to review and apply:

- **Top 25 Percent:** Apply the following to cells in the column "Sales"
 - Fill color: green
 - Font color: white

AaBbCc

Apply

Product	Sales
Laptop	\$12,000
Tablet	\$8,500
Smartphone	\$15,000
Monitor	\$6,000
Keyboard	\$4,000
Mouse	\$3,000
Printer	\$7,000
Desk	\$9,000
Chair	\$5,000
Headphones	\$6,500
Router	\$7,200
USB Drive	\$2,500
External HDD	\$4,800
Webcam	\$3,100
Gaming Mouse	\$8,000

2. Clean and Format Data: Customer Name

Customer Name
john doe
Jane DOE
ALICE smith
BOB jones
Charlie BROWN
david WILSON
emma JOHNSON
frank MARTIN
GEORGE hill
HARRY WHITE
Michael Scott
Jim Halpert
Pam Beesly
Dwight Schrute
Stanley Hudson
JOHN DOE

Copilot

Fix capitalization on customer name so the first letter of every word is capitalized

I wasn't able to fix the capitalization on the customer names. Please try again or check the data manually.

You can use the following formula to fix the capitalization of customer names in column A of Table17:

```
fx  
=PROPER(Table17[@[Customer Name]])
```

add this formula as a new column

Looking at A2:D18, here's 1 formula column to review and insert in Column E:

Proper Customer Name

Converts the customer names to proper case, ensuring that each name starts with a capital letter and the rest of the letters are in lowercase. This standardizes the format of customer names for better readability and consistency.

```
fx  
=PROPER([[Customer Name]])
```

Show explanation

	E
2	Proper Customer Name
3	John Doe
4	Jane Doe
5	Alice Smith
6	Bob Jones
...	...

+ Insert column

Proper Customer Name
John Doe
Jane Doe
Alice Smith
Bob Jones
Charlie Brown
David Wilson
Emma Johnson
Frank Martin
George Hill
Harry White
Michael Scott
Jim Halpert
Pam Beesly
Dwight Schrute
Stanley Hudson
John Doe

2. Clean and Format Data: Phone Number

Create a new column that fixes the phone number so there are no spaces or special characters (" "-" "(" ")" "."). Then format with the Number format, Special, Phone Number

Phone Number
123-456-7890
123 456 7890
(123)456-7890
123.456.7890
1234567890
987-654-3210
987 654 3210
(987)654-3210
987.654.3210
9876543210
(555) 123-4567
555-234-5678
555.345.6789
555 456 7890
555-567-8901
(123) 456-7890

To create a new column that fixes the phone number in Table17, follow these steps:

1. Insert a new column named "Fixed Phone Number" in Table17.
2. Use the following formula to remove spaces and special characters from the phone numbers in column B:

```
fx
=TEXTJOIN("", TRUE,
MID(Table17[@[Phone
Number]]),
FIND(MID(Table17[@[Phone
Number]]_ROW(INDIRECT("1:" &
LEN(Table17[@[Phone
```

3. Format the new column with the Number format, Special, Phone Number.

This formula will concatenate only the numeric characters from the phone number, effectively removing spaces and special characters.

That formula did not work, received #value! error

I apologize for the inconvenience. Let's use a different approach to remove spaces and special characters from the phone numbers.

1. Insert a new column named "Fixed Phone Number" in Table17.
2. Use the following formula in the new column to remove spaces and special characters from the phone numbers in column B:

```
fx
=TEXTJOIN("", TRUE,
IF(ISNUMBER(MID(Table17[@[Ph
one Number]]),
ROW(INDIRECT("1:" &
LEN(Table17[@[Phone
```

3. Format the new column with the Number format, Special, Phone Number.

The number format didn't work because the result is a text value

To convert the text value to a number format, you can use the following steps:

1. Insert a new column named "Fixed Phone Number" in Table17.
2. Use the following formula in the new column to remove spaces and special characters from the phone numbers in column B and convert the result to a number:

```
fx
=VALUE(TEXTJOIN("", TRUE,
IF(ISNUMBER(MID(Table17[@[Ph
one Number]]),
ROW(INDIRECT("1:" &
LEN(Table17[@[Phone
```

3. Format the new column with the Number format, Special, Phone Number.

Fixed Phone Number
(123) 456-7890
(123) 456-7890
(123) 456-7890
(123) 456-7890
(123) 456-7890
(987) 654-3210
(987) 654-3210
(987) 654-3210
(987) 654-3210
(987) 654-3210
(555) 123-4567
(555) 234-5678
(555) 345-6789
(555) 456-7890
(555) 567-8901
(123) 456-7890

2. Clean and Format Data: Date

Date
01/02/2024
02-03-2024
2024/03/04
April 5, 2024
06.07.2024
07/08/2024
08-09-2024
2024/09/10
October 11, 2024
12.13.2024
2023/01/15
February 16, 2023
03-17-2023
April 18, 2023
05.19.2023
01/02/2024

Fix the date field so the dates are displayed as "mm/dd/yyyy" but before the format can be applied, I need a formula to standardize the current dates

Looking at A2:F18, here's 1 formula column to review and insert in Column G:

Standardized Date

Converts the date in each row to a standardized format of mm/dd/yyyy (month/day/year) to ensure consistency and ease of comparison across all entries in this table.

```
fx
=TEXT(DATEVALUE([@Date]), "[$-en-us]mm/dd/yyyy")
```

Show explanation

	G
2	Standardized Date
3	01/02/2024
4	02/03/2024
5	03/04/2024
6	04/05/2024
...	...

+ Insert column

dates with the format "mm.dd.yyyy" are getting #value! error

Looking at A2:G18, here's 1 formula column to review and insert in Column H:

Standardized Date2

Standardizes the date format by converting various date representations into a consistent "mm/dd/yyyy" format, ensuring uniformity across all entries in the table.

```
fx
=TEXT(DATEVALUE(SUBSTITUTE(SUBSTITUTE([@Date], ".", "/"), "-", "/")), "[$-en-us]mm/dd/yyyy")
```

Show explanation

	H
2	Standardized Date2
3	01/02/2024
4	02/03/2024

result is not a date value so it cannot be used in formulas

To ensure the result is a date value that can be used in formulas, use the following formula to standardize the dates in column C of Table17:

1. Insert a new column named "Standardized Date" in Table17.
2. Use the following formula in the new column to standardize the dates:

```
fx
=DATEVALUE(SUBSTITUTE(SUBSTITUTE([@Date], ".", "/"), "-", "/"))
```

3. Format the new column with the date format "mm/dd/yyyy".

Standardized Date
01/02/2024
02/03/2024
03/04/2024
04/05/2024
06/07/2024
07/08/2024
08/09/2024
09/10/2024
10/11/2024
12/13/2024
01/15/2023
02/16/2023
03/17/2023
04/18/2023
05/19/2023
01/02/2024

Copilot to Analyze Data



Use Copilot in Excel to Analyze Data

1. Summarize Dataset
2. Find Average Sales Per Month
3. Detect Trends and Patterns
4. Create Charts

1. Summarize Dataset #1

Product	Sales	Profit	Region
Laptop	\$12,000	\$3,000	North
Tablet	\$8,500	\$1,800	South
Smartphone	\$15,000	\$4,000	West
Monitor	\$6,000	\$1,200	East
Keyboard	\$4,000	\$600	North
Mouse	\$3,000	\$400	South
Printer	\$7,000	\$1,500	West
Desk	\$9,000	\$2,500	East
Chair	\$5,000	\$900	North
Headphones	\$6,500	\$1,400	South

Creates PivotTable/
PivotChart

Summarize this dataset

I analyzed data in A1:D11, and here's what I found:

'Sales' and 'Profit' by 'Product' and 'Region'

Region	Product		Sum ...
	Chair	Desk	
East			\$9,000
North	\$5,000	\$900	
South			
West			

... Add to a new sheet

AI-generated content may be incorrect

You are asking for a summary of the dataset, but it does not specify the exact type of summary or the columns to be considered. I recommended an answer for summarizing the total sales and profit by product and region.

Copy

AI-generated content may be incorrect

Summarize total sales by region.

Summarize total profit by product.

Summarize total sales by region

I analyzed data in A1:D11, and here's what I found:

'Sales' by 'Region'

Sum of Sales (Thousands)

West
North
South
East

\$0 \$5 \$10 \$15 \$20 \$25

... Add to a new sheet

AI-generated content may be incorrect

The total sales by region are \$22,000 for West and \$21,000 for North. See the table above for more details.

AI-generated content may be incorrect

Show data insights

Show data insights

I analyzed data in A1:D11, and here's what I found:

'Sales' by 'Product'

Sum of Sales (Thousands)

Product

\$0 \$2 \$4 \$6 \$8 \$10 \$12 \$14 \$16

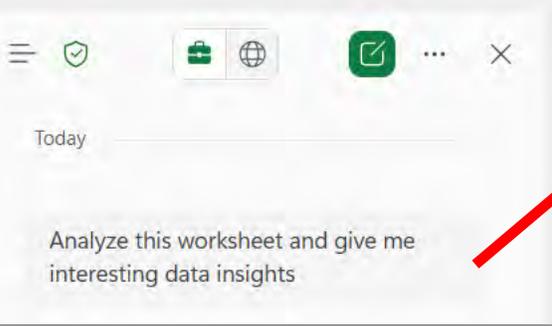
... Add to a new sheet

AI-generated content may be incorrect

The total sales by product include \$15,000 for Smartphone and \$12,000 for Laptop. See the table above for more details.

1. Summarize Dataset #2

Transac	Date	Product	Region	Sales Am	Unit
20001	1/1/2023	Mouse	West	\$4,978	6
20002	1/2/2023	Smartphone	West	\$518	2
20003	1/3/2023	Smartwatch	West	\$3,230	2
20004	1/4/2023	Monitor			
20005	1/5/2023	Smartwatc			
20006	1/6/2023	Chair			
20007	1/7/2023	Keyboard			
20008	1/8/2023	Gaming Co			
20009	1/9/2023	Printer			
20010	1/10/2023	Headphon			
20011	1/11/2023	Tablet			
20012	1/12/2023	VR Headse			



Back to Copilot Chat

Lots of detail on my simple dataset, think what it can do with your data!

Here's a concise, insight-rich readout of the "Summarize2" transactions in your workbook, plus visuals you can drop into a deck right away.

Executive snapshot

- Revenue & volume.** The dataset contains 500 transactions totaling \$1,383,315 across 2,506 units, with an average order value of ~\$2,767.
- Momentum.** Revenue peaked in Nov-2023 and troughed in May-2024; from the first to the last month in the file, revenue is down ~52%, suggesting a notable deceleration as the series approaches its end.
- Regional mix.** Sales are fairly balanced by region, with a slight edge to East, then North, followed by South and West.
- Product mix.** Laptops, Routers, and Monitors are the top three revenue drivers and together account for ~25% of all sales—healthy but not overly concentrated.
- Stability.** Month-to-month revenue variance is modest (coef. of variation ≈ 0.14), but there are a few sharp swings that are worth tracking.

What's interesting (and actionable)

1) Seasonality & trend

- The best month is Nov-2023, while May-2024 is the softest. This pattern hints at a Q4 lift and a pronounced soft patch in late spring—useful for demand planning and campaign timing.
- The month-over-month change ranges from +11% at the high to -51% at the low, so while the series is generally stable, there are a couple of step-downs to watch (likely post-holiday normalization).

Monthly trend

2) Geographic performance

2. Find Average Sales Per Month

Transac	Date	Product	Region	Sales Am	Unit
20001	1/1/2023	Mouse	West	\$4,978	6
20002	1/2/2023	Smartphone	West	\$518	2
20003	1/3/2023	Smartwatch	West		
20004	1/4/2023	Monitor	East		
20005	1/5/2023	Smartwatch	West		
20006	1/6/2023	Chair	South		
20007	1/7/2023	Keyboard	East		
20008	1/8/2023	Gaming Console	North		
20009	1/9/2023	Printer	North		
20010	1/10/2023	Headphones	North		
20011	1/11/2023	Tablet	East		
20012	1/12/2023	VR Headset	South		

Find average sales per month

I analyzed data in A1:F501, and here's what I found:

'Sales Amount' by year and month of 'Date'

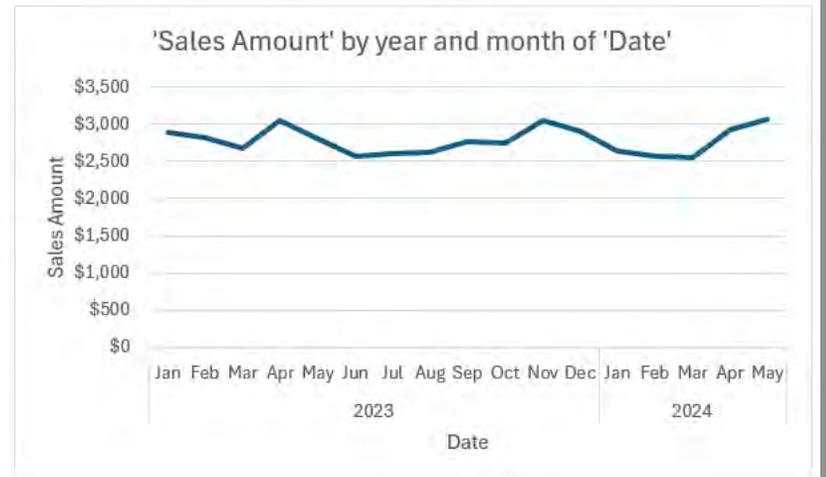
Average of Sales Amount

+ Add to a new sheet

AI-generated content may be incorrect

The average sales amount per month ranges from \$2,549 to \$3,071. See the chart above for more details.

Years	Months	Average of Sales Amount
2023	Jan	\$2,882
	Feb	\$2,813
	Mar	\$2,677
	Apr	\$3,045
	May	\$2,806
	Jun	\$2,567
	Jul	\$2,609
	Aug	\$2,614
	Sep	\$2,767
	Oct	\$2,739
	Nov	\$3,055
	Dec	\$2,900
2023 Total		\$2,788
2024	Jan	\$2,633
	Feb	\$2,560
	Mar	\$2,549
	Apr	\$2,921
	May	\$3,071
2024 Total		\$2,708
Grand Total		\$2,767



3. Detect Trends and Patterns

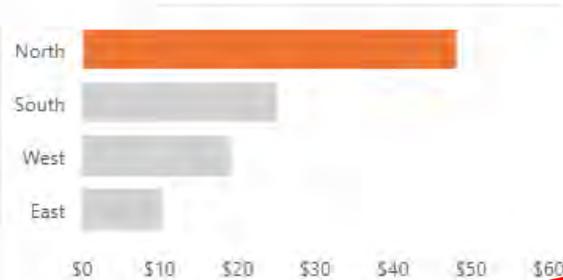
Transac	Date	Product	Region
20001	1/1/2023	Mouse	West
20002	1/2/2023	Smartphone	West
20003	1/3/2023	Smartwatch	West
20004	1/4/2023	Monitor	East
20005	1/5/2023	Smartwatch	West
20006	1/6/2023	Chair	South
20007	1/7/2023	Keyboard	East
20008	1/8/2023	Gaming Console	North
20009	1/9/2023	Printer	North
20010	1/10/2023	Headphones	North
20011	1/11/2023	Tablet	East
20012	1/12/2023	VR Headset	South

What are the trends for sales by month by region

I analyzed data in A1:F501, and here's what I found:

For 'Product: Smartwatch', 'Region': North has noticeably higher 'Sales Amount'.

Sum of Sales Amount (Thousands)



+ Add to a new sheet

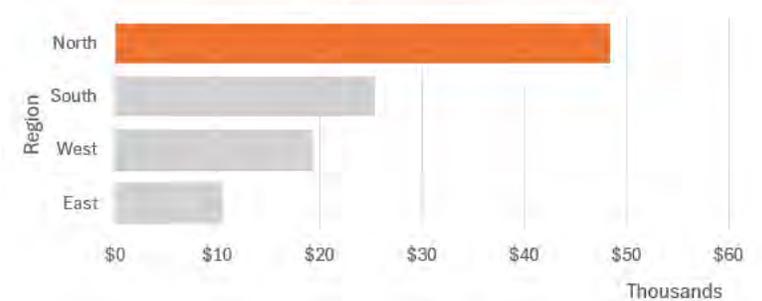
AI-generated content may be incorrect



The trends for sales by month by region show that the North region has noticeably higher sales amounts for the product Smartwatch. See the chart above for more details.

Region	Sum of Sales Amount
North	\$48,318
South	\$25,338
West	\$19,262
East	\$10,414
Grand Total	\$103,332

For 'Product: Smartwatch', 'Region': North has noticeably higher 'Sales Amount'.



Sales Amount

4. Create Charts

Transac	Date	Product
20001	1/1/2023	Mouse
20002	1/2/2023	Smartphone
20003	1/3/2023	Smartwatch
20004	1/4/2023	Monitor
20005	1/5/2023	Smartwatch
20006	1/6/2023	Chair
20007	1/7/2023	Keyboard
20008	1/8/2023	Gaming Console
20009	1/9/2023	Printer
20010	1/10/2023	Headphones
20011	1/11/2023	Tablet
20012	1/12/2023	VR Headset

Create a line chart showing sales by year by month by region

I analyzed data in A1:F501, and here's what I found:

Sum of Sales Amount (Thousands)



Chart1DONE

+ Add to a new sheet

AI-generated content may be incorrect

I created a line chart showing sales by year, month, and region. The North region has noticeably higher sales amounts for the product Smartwatch. See the chart above for more details.

Generate a line chart for sales trends over the past 12 months

I analyzed data in A1:F501, and here's what I found:

Date	Sum of Sales Amount
2023-06	\$77,012
2023-07	\$80,888
2023-08	\$81,036
2023-09	\$83,008
2023-10	\$84,902
2023-11	\$91,655
2023-12	\$89,898
...	...

...

+ Add to a new sheet

AI-generated content may be incorrect

The sales trends over the past 12 months show varying amounts, with the highest sales in November 2023 (\$91,655) and the lowest in May 2024 (\$42,995). See the table above for more details.

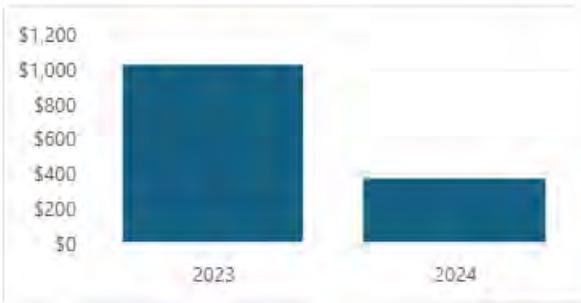
- Select: Add to a new sheet
- Go to New Sheet and select table
- Show this data as a line chart
- Select: Add to this sheet

Chart2DONE

4. Create Charts (continued)

Create a column chart for annual sales

I analyzed data in A1:F501, and here's what I found:
Sum of Sales Amount (Thousands)



+ Add to a new sheet

AI-generated content may be incorrect



I have created a column chart showing annual sales. The sales amount for 2023 is \$1,017,792, and for 2024, it is \$365,523. See the chart above for more details.

Now show breakdown by month

I analyzed data in A1:F501, and here's what I found:
'Sales Amount' by year and month of 'Date'
Sum of Sales Amount (Thousands)



+ Add to a new sheet

AI-generated content may be incorrect



Chart3DONE

The breakdown of annual sales by month shows varying amounts, with the highest sales in November 2023 (\$91,655) and the lowest in May 2024 (\$42,995). See the table above for more details.

Now make this a column chart

I analyzed data in A1:F501, and here's what I found:
Sum of Sales Amount (Thousands)



+ Add to a new sheet

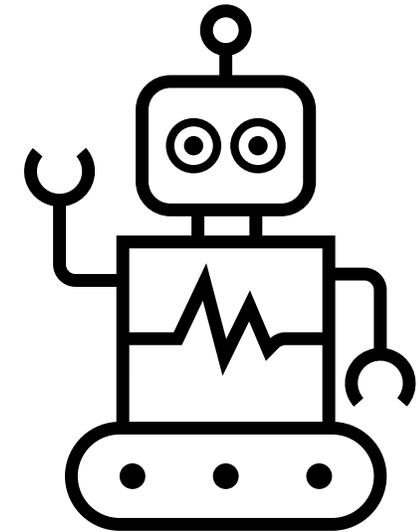
AI-generated content may be incorrect



Chart4DONE

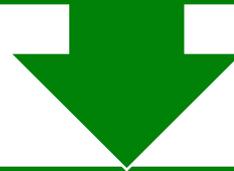
I have created a column chart showing the breakdown of annual sales by month. See the chart above for more details.

Copilot to Automate Repetitive Tasks



The Scenario

We have raw data that is not in the correct order



We want to:

Reorder the columns

Add a Total column

Turn it into an Excel
Table

Format the dollar
columns to the
Accounting format

Add a Grand Total
for the Total column

Data Set Example

	A	B	C	D	E	F
1	Unit Price	Qty	Customer Name	Product Name	Cust#	
2	29.99	77	Justin A Robins	ML Mountain T	33930	
3	2.29	238	Tamara Zhu	Patch Kit/8 Pat	50470	
4	3.99	15	Nicole White	Road Tire Tube	43580	
5	2443.35	5	Nancy L Sanchez	Road-250 Red,	42860	
6	34.99	50	Reginald Navarr	Sport-100 Helm	45800	
7	28.99	150	Autumn Zhu	Touring Tire	14170	
8	21.49	110	Nicole White	LL Road Tire	43580	
9	2049.09	18	Denise Mehta	Mountain-200 I	21840	
10	2319.99	13	Tamara Zhu	Mountain-200 S	50470	
11	4.99	23	Autumn Zhu	Touring Tire Tul	14170	
12	2384.07	12	Reginald Navarr	Touring-1000 B	45800	
13						
14						
15	E - A	C - B	D - C	B - D	A - E	d * e
16	Cust#	Customer Name	Product Name	Qty	Unit Price	Total
17						

Process Steps

Type out each step

As if you were doing it manually

Put each step in a separate cell

Follow each step manually

Copy & paste steps into Copilot

Test on a sample spreadsheet

Example of Our Instructions

G

Instructions:

Create an Excel Macro that:

Uses the AutomateTasksData sheet

Where column A is UnitPrice, column B is Qty, Column C is Customer, Column D is Product and column E is cust#

Insert AutomateTasksFinal sheet and Rearrange columns as follows: Cust#, Customer, Product, Qty, UnitPrice

Make the data into an Excel table

Add column F as a Total column where it is Qty * Unit Price

Format the UnitPrice and Total columns as Accounting

Add a Total Row for the Total Column

Create new sheet so we don't affect raw data & can test/re-test

Paste Instructions into Copilot

Create an Excel Macro that: Uses the AutomateTasksData sheet Where column A is UnitPrice, column B is Qty, Column C is Customer, Colmun D is Product and column E is cust# Insert AutomateTasksFinal sheet and Rearrange columns as follows: Cust#, Customer, Product, Qty, UnitPrice Make the data into an Excel table Add column F as a Total column where it is Qty * Unit Price Format the UnitPrice and Total columns as Accounting Add a Total Row for the Total Column

CAUTION: Please carefully review the generated VBA code before running it!

```
Sub AutomateTasks()
    Dim wsData As Worksheet
    Dim wsFinal As Worksheet
    Dim tbl As ListObject
    Dim lastRow As Long

    ' Set references to the worksheets
    Set wsData = ThisWorkbook.Sheets("AutomateTasksData")

    ' Insert the new sheet
    Set wsFinal =
ThisWorkbook.Sheets.Add(After:=ThisWorkbook.Sheets(ThisWorkbo
ok.Sheets.Count))
    wsFinal.Name = "AutomateTasksFinal"
```

How do I run this macro?

Can you explain the code?

To run the macro, follow these steps:

1. Press **Alt + F11** to open the VBA editor.
2. In the VBA editor, go to **Insert > Module** to create a new module.
3. Copy and paste the provided VBA code into the module.
4. Close the VBA editor.
5. Press **Alt + F8** to open the "Macro" dialog box.
6. Select **AutomateTasks** from the list of macros.
7. Click **Run**.

Make sure your workbook is saved as a macro-enabled workbook (.xlsm) to run the macro.

How do I run this macro?

Can you explain what each part of the code does?

What should I do if I encounter an error?

How can I modify the macro to include additional columns?



Other suggestions

Pasted into Excel and Ran Macro - End Result

	A	B	C	D	E	F
1	Cust#	Customer	Product	Qty	UnitPrice	Total
2	33930	Justin A Robir	ML Mountai	77	\$ 29.99	\$ 2,309.23
3	50470	Tamara Zhu	Patch Kit/8	238	\$ 2.29	\$ 545.02
4	43580	Nicole White	Road Tire Ti	15	\$ 3.99	\$ 59.85
5	42860	Nancy L Sanc	Road-250 R	5	\$ 2,443.35	\$ 12,216.75
6	45800	Reginald Nav	Sport-100 F	50	\$ 34.99	\$ 1,749.50
7	14170	Autumn Zhu	Touring Tire	150	\$ 28.99	\$ 4,348.50
8	43580	Nicole White	LL Road Tire	110	\$ 21.49	\$ 2,363.90
9	21840	Denise Melh	Mountain-2	18	\$ 2,049.09	\$ 36,883.62
10		Tamara Zhu	Mountain-2	13	\$ 2,319.99	\$ 30,159.87
11		Autumn Zhu	Touring Tire	23	\$ 4.99	\$ 114.77
12	45800	Reginald Nav	Touring-100	12	\$ 2,384.07	\$ 28,608.84
13	Total					\$119,359.85

Might want to ask to
autofit column widths

Wrap-Up



Presentation Wrap-Up

Copilot is an AI-powered assistant built on OpenAI's GPT models

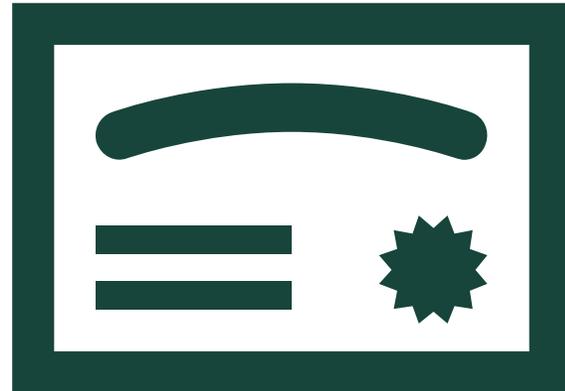
There are multiple versions of Copilot, some require monthly license

Copilot can be used in Excel to:

- Learn Excel
- Help with formulas
- Enhance productivity
- Analyze data
- Automate repetitive tasks

Questions?





Thank You!!



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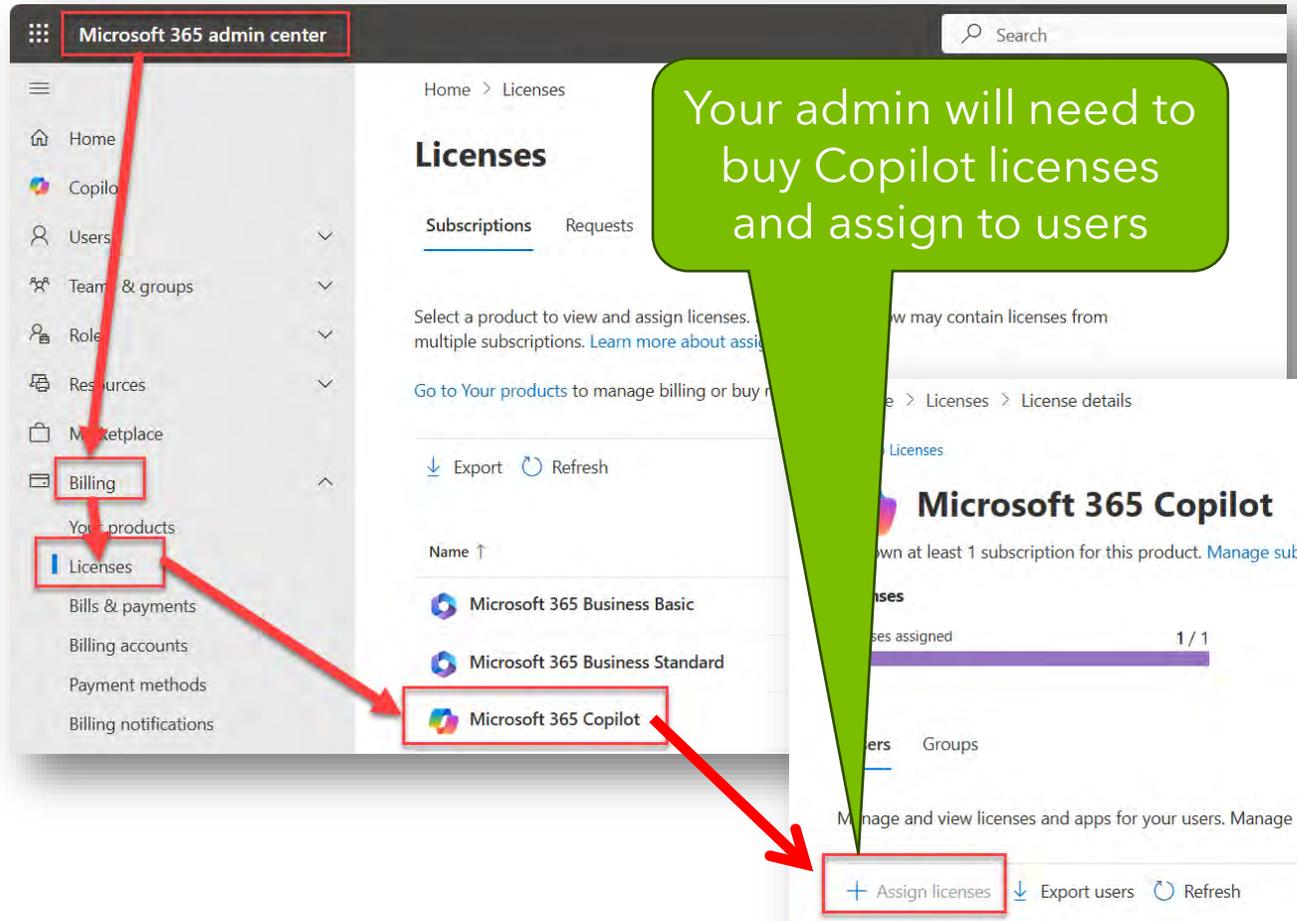


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ONE FINAL NOTE

How to Enable Microsoft 365 Copilot in Desktop Apps

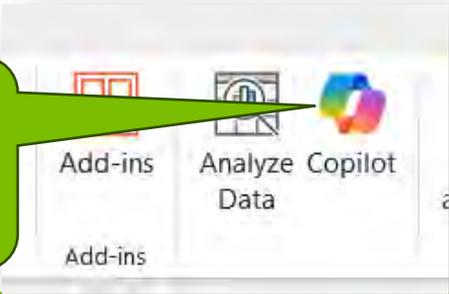


Your admin will need to buy Copilot licenses and assign to users

User will need to go to File > Account in any M365 app, select Update License, then close & reopen app



Copilot will now appear on Home ribbon



Smart Tech, Sound Judgement: Navigating AI Responsibly



Set your browser to
HIGGINS.CNF.IO
For interactive polling
and Q & A

Presented By
John H. Higgins, CPA.CITP
Rochester, Michigan



Learning Goals

- Recognize the ethical dilemmas and risks associated with AI applications that you can encounter
- Identify practical guidelines for mitigating them

Set your browser to

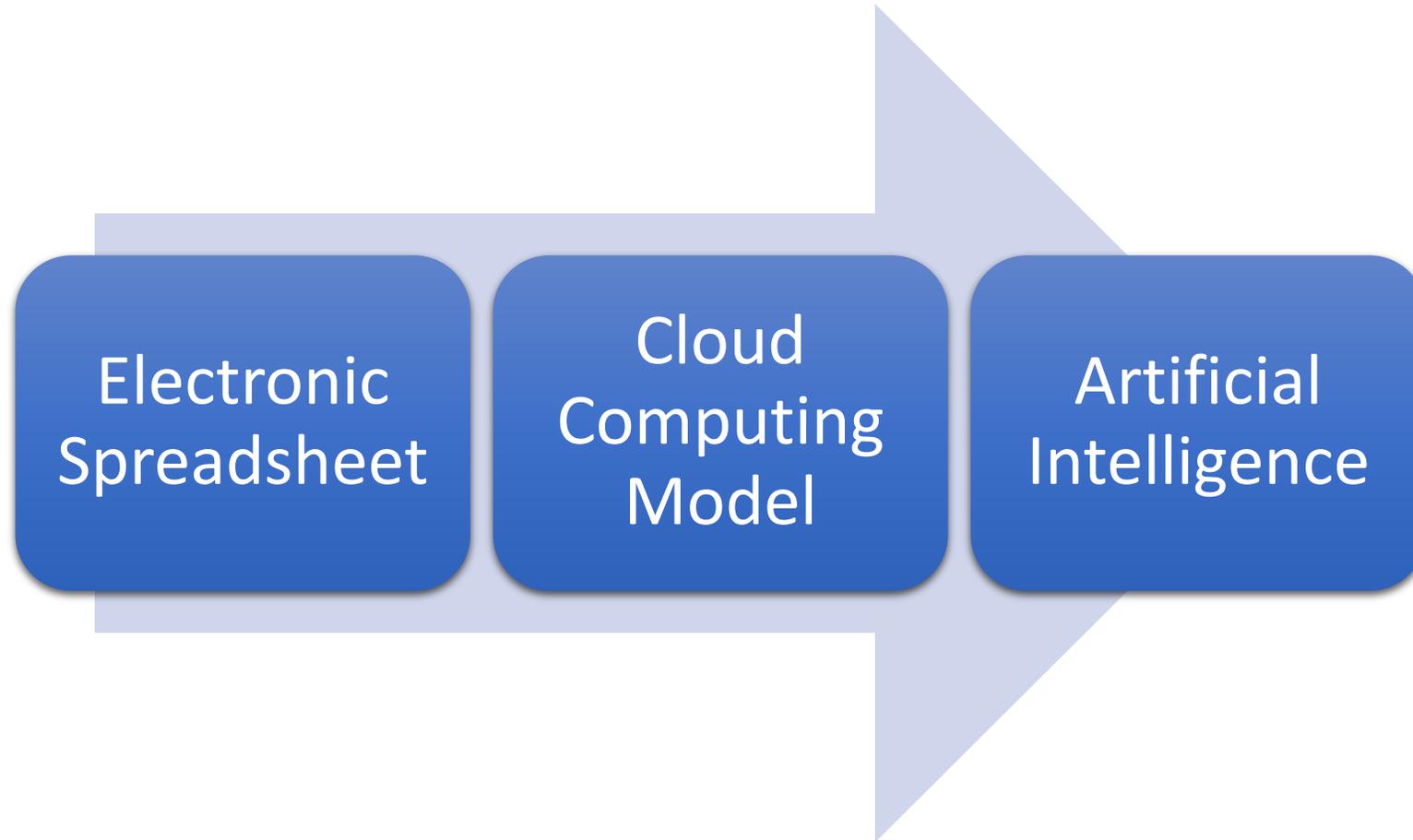
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For interactive polling
and Q & A

Presentation Outline

- Why AI Ethics is an Important Topic
- AI Usage Ethical Dilemmas & Risks
 - Where do they originate
 - What are they specifically
 - How to mitigate them
- Wrap-up

The Big Three CPA Technology Revolutions



Live Content Slide

When playing as a slideshow, this slide will display live content

**Poll: What is the first thought, in a word, that comes to your mind with
AI?**

WHY AI ETHICS IS AN IMPORTANT TOPIC?



What's wrong with this picture?



“The new spring in AI is the most significant development in computing in my lifetime. Every month, there are stunning new applications and transformative new techniques. But such powerful tools also bring with them new questions and responsibilities.”

Sergey Brin

Co-founder Google

“The most important thing to know about AI, it is the first technology in history that can make decisions by itself and can create new ideas by itself.”

Yuval Noah Harari
Best Selling Author – Sapiens

“ . . . And can take actions by itself”

John Higgins, CPA

Live Content Slide

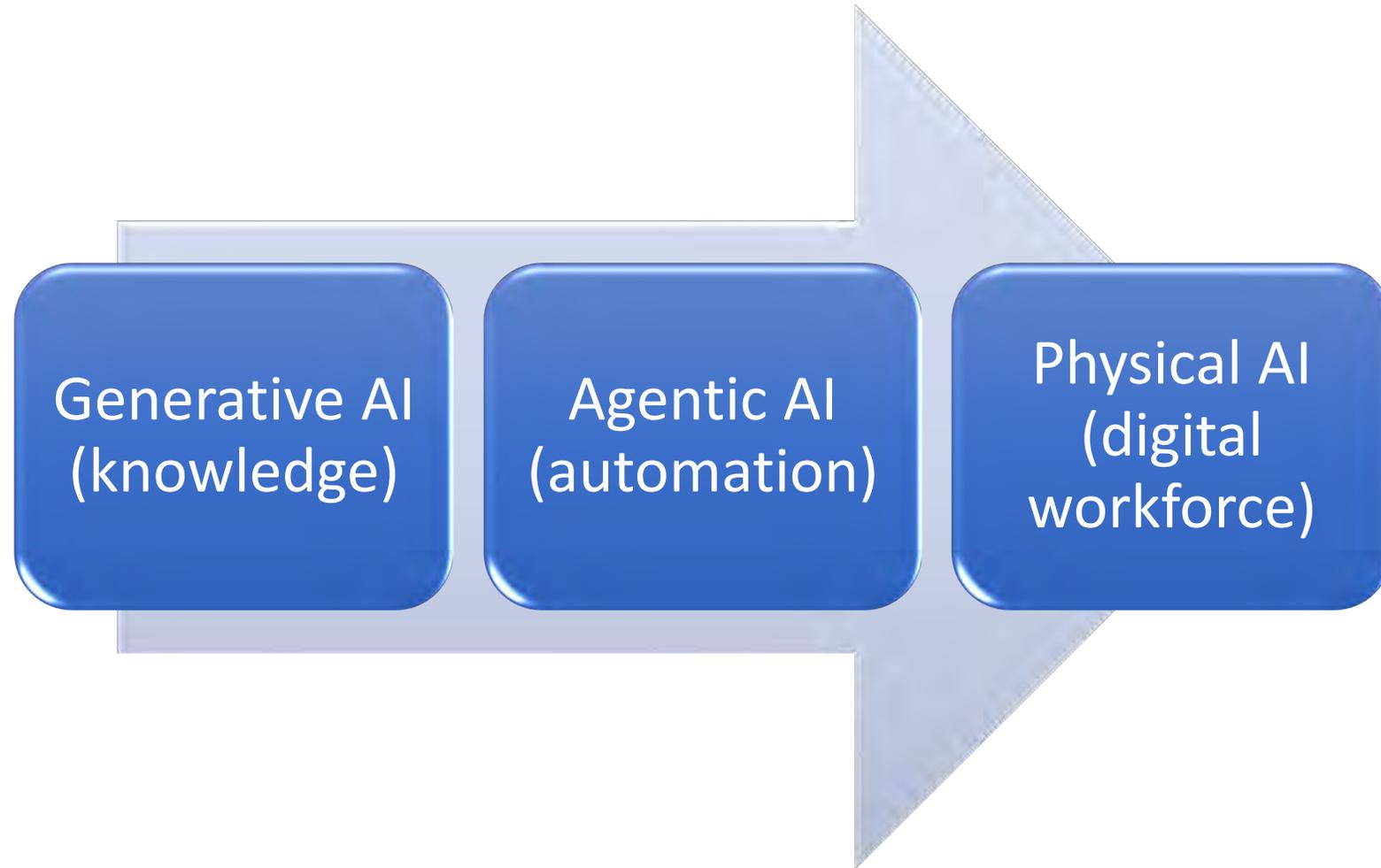
When playing as a slideshow, this slide will display live content

Poll: What concerns you most about AI technology?

THE SOURCE OF AI ETHICAL DILEMMAS & RISKS



AI Technology Evolution

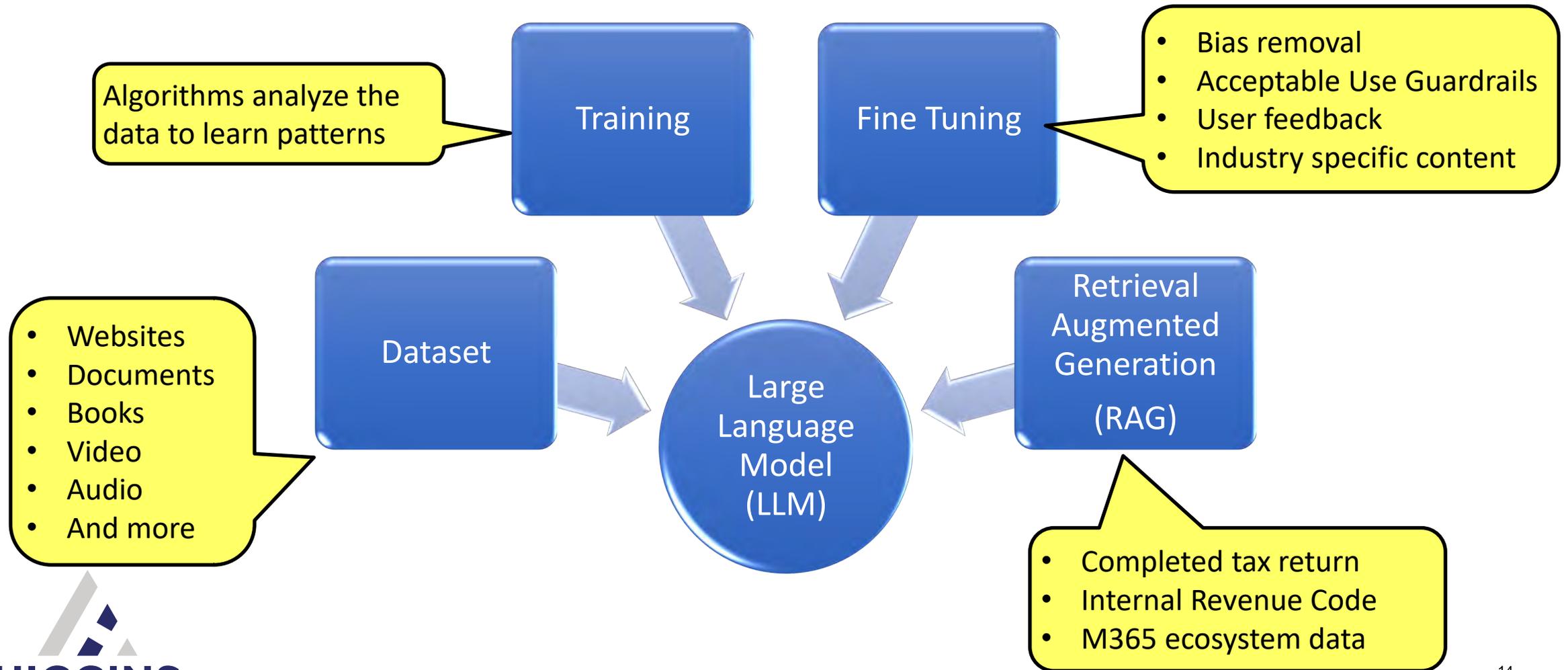


A Simple Generative AI demo

- ***Prompt:*** What is AGI?
- ***Response:*** AGI stands for Artificial General Intelligence.
- ***Prompt:*** In the context of income taxes.
- ***Response:*** In the context of *income taxes*, AGI refers to *Adjusted Gross Income*.

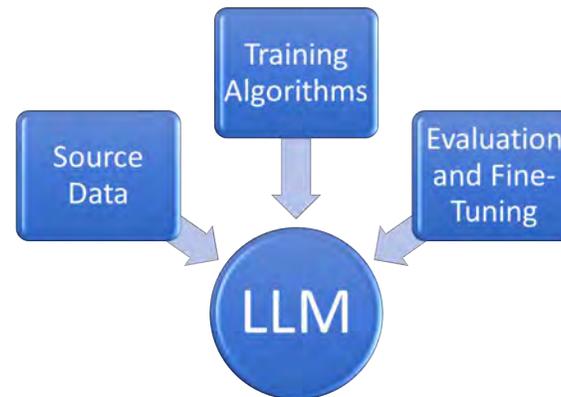


Building a Large Language Model (LLM)



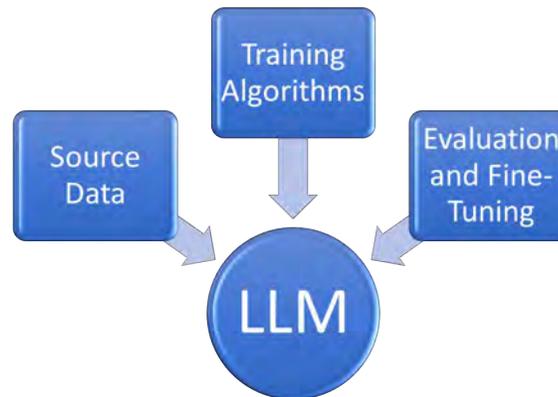
LLM Source Data Ethical Risks

- AI application developer determines the source of the data
- The source data will have inherent biases
- Source data may have copyright issues



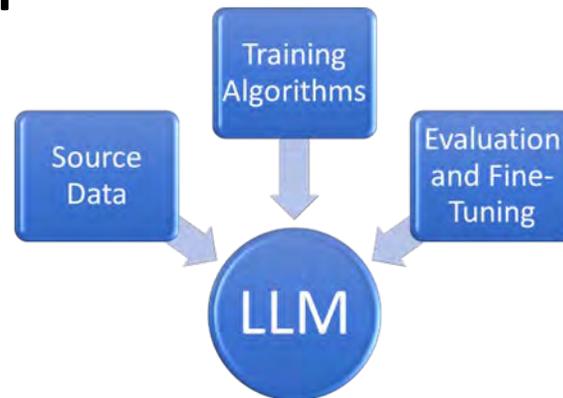
LLM Training Algorithm Ethical Risks

- AI application developer defines the algorithms that train the data
- Different weightings can be assigned to different classifications of data to remove / embed biases



LLM Evaluation and Fine-tuning Ethical Risks

- AI application developer defines the parameters of the “guard rails” to exclude/prevent inappropriate data
- AI developer defines “acceptable use” policies for user prompts

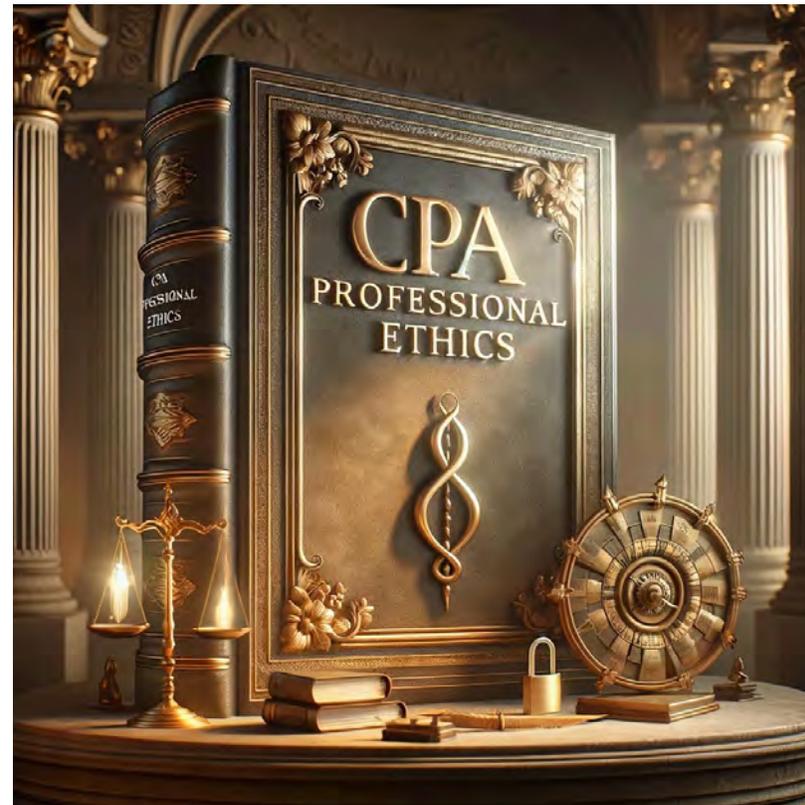


Live Content Slide

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Poll: Would you be willing to upload your blood test results to generative AI if it would help you diagnose your illness quicker and / or more effectively?

REVIEW OF THE CPA PROFESSIONAL ETHICS FRAMEWORK



AICPA Code of Conduct

- Adopted by members of the AICPA
- Provides guidance and rules for CPAs in their performance of professional responsibilities
- Disciplinary repercussions for failure to comply

Key Principles of Professional Conduct

- Act in the public interest
- Integrity
- Objectivity and Independence
- Due care



AICPA Code of Conduct
Full Text



ChatGPT Summary

Additional Regulatory Entities to Consider

- State Board of Accountancy
- SEC (Securities and Exchange Commission)
- PCAOB (Public Company Accounting Oversight Board)
- DOL (Department of Labor)
- GAO (Government Accountability Office)
- Federal, state and local taxing authorities

Live Content Slide

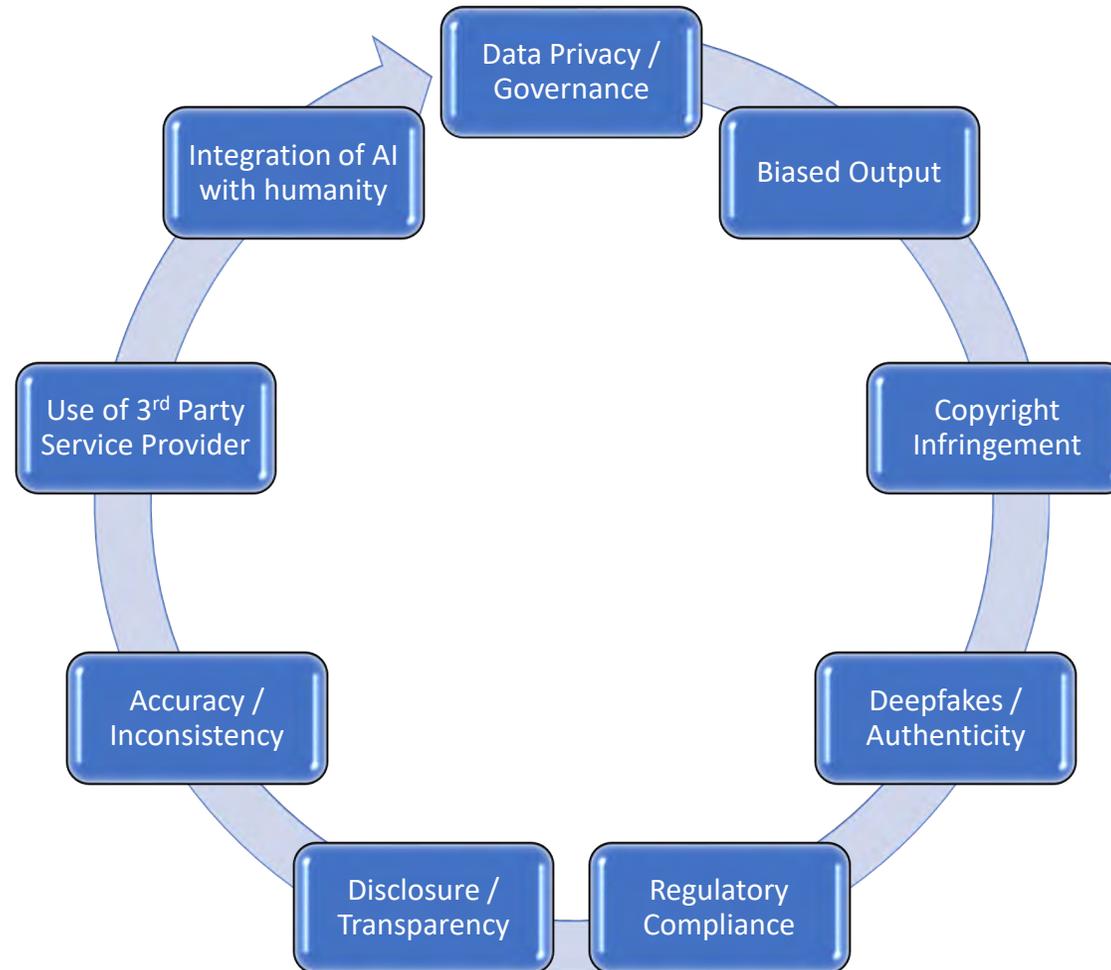
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Poll: Where would you place your organization on the AI adoption timeline?

AI ETHICAL RISK AND MITIGATION



AI Ethical Risks and Mitigation



MITIGATING THE ETHICAL DILEMMAS & RISKS



#1 - Apply Due Diligence in Selecting AI Tools

- Select reputable tools
- Investigate their data privacy and acceptable use policies.
- Limit staff to using only approved tools

#2 - Develop Documentation Standards

- Maintain an audit trail of AI prompts and outputs for client engagements as part of your engagement documentation standards
- Establish a policy for when and how AI usage on client engagements should be disclosed
- Consult with your professional liability carrier for guidance

#3 - Authenticity and Accuracy Validation Policy

- Establish guidelines for standard procedures for validating the accuracy and authenticity of AI generated output
- Include links to sources in prompt output

#4 - AI Acceptable Usage Policies and Procedures

- Establish an AI prompt champion to lead communication, oversight and knowledge sharing regarding prompt best practices
- Maintain a library of firm approved prompts for technical applications on client engagements
- Monitor standards setters and regulatory agencies for compliance requirements

#5 - Develop an AI Acceptable Usage Policy

- Incorporate all these policies & procedures in a comprehensive and documented AI usage policy
- Provide mandatory education on the policy for all staff
- Monitor and update quarterly
- Monitor standards setters and regulatory agencies for compliance requirements

Machines are getting more like humans



Humans are getting more like machines



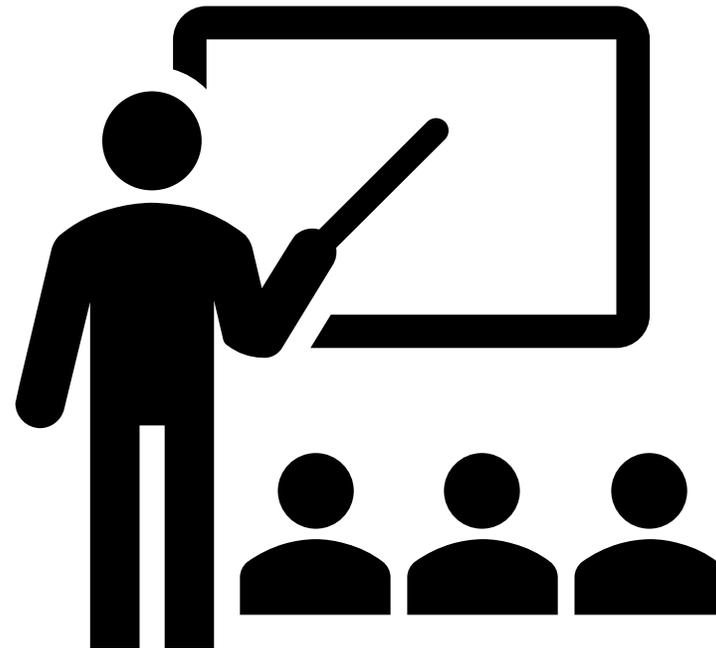
Integration of AI & Humanity

- Risk of over reliance on AI generated content
- The fear of job security is real and should not be dismissed
- Communication , transparency and education are key

Current Day Examples

- [HeyGen](#)
- [Figure 03](#)
- [Neuralink](#)

WRAP-UP



In Summary

- There are many ethical implications and risks associated with using generative AI technology
- Specific standards and regulations are currently limited
- Develop an AI usage policy for your organization
- Educate your staff on the risks of AI
- Use your core ethics as your foundation to guide you!

Thank you!!!

Let's connect on LinkedIn →

