EXCEL & ACCESSIBILITY

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ICAEW Blog series:

- Accessibility Features in Excel – Part 1: Overview

- Accessibility Features in Excel – Part 2: Introduction

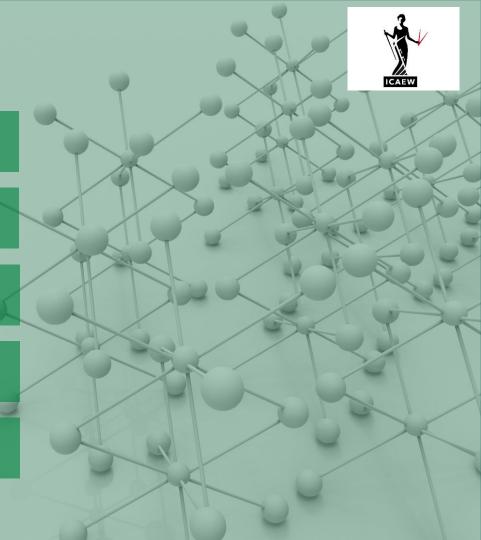- Accessibility Features in Excel – Part 3: Best practices & features

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AGENDA

03	Introduction
04	Accessibility in Excel
05	Accessibility Features
09	Best Practices
10	Q&A!

INTRODUCTION

1.3bn
- 1.3 bn people, around 16% of the global population currently experience significant disability.

2.2bn
- More than 2.2 billion people have a new or distance vision impairment.

9-12%
- 9 to 12 percent of the population is affected by dyslexia.

>75m
- More than 75 million people, around 1% of the population has autism spectrum disorder.

World Heath Organisation – Disability Key Facts, Dec 2022
Disability (who.int)

World Heath Organisation – Blindness and visual impairment
Blindness and vision impairment (who.int)
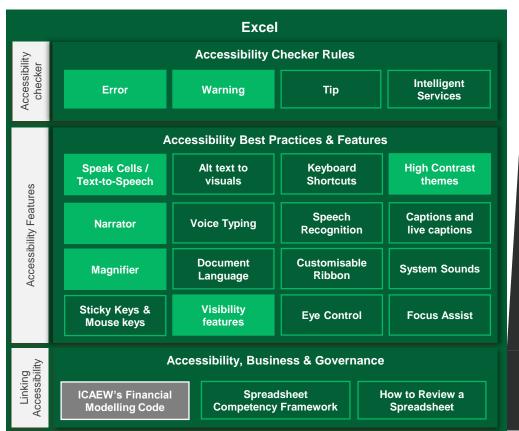
The European Dyslexia Association
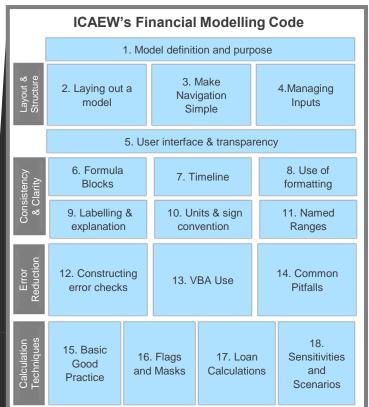What is dyslexia – European Dyslexia Association (eda-info.eu)

Centers for Disease Control and Prevention
Data and Statistics on Autism Spectrum Disorder | Autism Spectrum Disorder (ASD) | CDC

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EXCEL ACCESSIBILITY

Excel

Accessibility checker

Accessibility Checker Rules

Error	Warning	Tip	Intelligent Services

Accessibility Features

Accessibility Best Practices & Features

Speak Cells / Text-to-Speech	Alt text to visuals	Keyboard Shortcuts	High Contrast themes
Narrator	Voice Typing	Speech Recognition	Captions and live captions
Magnifier	Document Language	Customisable Ribbon	System Sounds
Sticky Keys & Mouse keys	Visibility features	Eye Control	Focus Assist

Linking Accessibility

Accessibility, Business & Governance

ICAEW's Financial Modelling Code	Spreadsheet Competency Framework	How to Review a Spreadsheet

ICAEW's Financial Modelling Code

1. Model definition and purpose			

Layout & Structure

2. Laying out a model	3. Make Navigation Simple	4.Managing Inputs

5. User interface & transparency		

Consistency & Clarity

6. Formula Blocks	7. Timeline	8. Use of formatting
9. Labelling & explanation	10. Units & sign convention	11. Named Ranges

Error Reduction

12. Constructing error checks	13. VBA Use	14. Common Pitfalls

Calculation Techniques

15. Basic Good Practice	16. Flags and Masks	17. Loan Calculations	18. Sensitivities and Scenarios

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20 PRINCIPLES FOR GOOD SPREADSHEET PRACTICE

STRATEGY AND PLAN

1. Determine how much your organisation depends on spreadsheets and plan your approach and processes accordingly.
2. Adopt a consistent methodology for spreadsheets in your organisation.
3. Ensure designers and users of spreadsheets have appropriate knowledge, competence, experience, and awareness of functionality.
4. Determine if a spreadsheet is a suitable tool.
5. Focus on the purposes of the spreadsheet.
6. **Tailor the design and documentation to the needs of the audience and dependent processes**

DESIGN AND BUILD

7. **Make the spreadsheet easy to use, providing supporting guidance where helpful.**
8. **Design with adaptability in mind to minimise future manual intervention.**
9. **Structure workbooks with a clear flow of inputs, processes, and outputs.**
10. Seek to control, clean, and optimise data quality and structure prior to using them.
11. Structure worksheets to avoid inconsistent logic and layout.
12. Keep formulas consistent across ranges.
13. Use the simplest features, functions, or formulas for the task.
14. Avoid using fixed values within formulas.
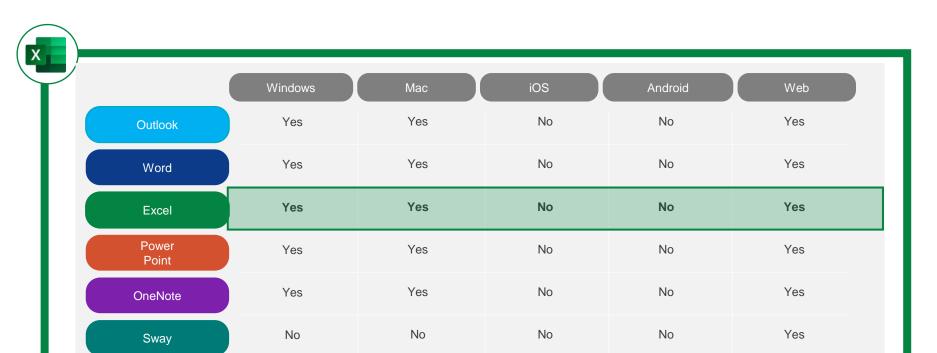15. Refer to existing calculated results instead of reperforming the calculation.

CONTROL AND MANAGEMENT

16. Collaborate in design and review processes. This ensures accuracy, robustness, and the mitigation of risks.
17. Build in checks, controls, and alerts from the outset.
18. Test and review to reduce the risk of error and identify inefficiencies.
19. Ensure there is a regular process of backup and version control. This minimises loss of work and avoids the use of the wrong version.
20. Manage access levels and protection to reduce the risk of accidental or malicious changes

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ACCESSIBILITY CHECKER: ERRORS & WARNINGS

	Windows	Mac	iOS	Android	Web
Outlook	Yes	Yes	No	No	Yes
Word	Yes	Yes	No	No	Yes
Excel	**Yes**	**Yes**	**No**	**No**	**Yes**
Power Point	Yes	Yes	No	No	Yes
OneNote	Yes	Yes	No	No	Yes
Sway	No	No	No	No	Yes
Visio	Yes	n/a	No	n/a	Yes

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Accessibility Features in Excel

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ACCESSIBILITY CHECKER

What is Accessibility Checker?

The Accessibility Checker is a tool that verifies your file against a set of rules that identify possible issues for people with disabilities and classifies each issue as an **error, warning** or **tip**. It explains why each issue might be a potential problem and suggests how you can resolve the issues that appear.

Error

If content in the file makes it very difficult or impossible for someone with a disability to use, the Accessibility Checker classifies it as an error.

Warning

If the content in most (but not necessarily all) cases is difficult for people with disabilities to understand, the Accessibility Checker gives a warning.

Tip

When there is content that people with disabilities can understand but that could be better organised or could be presented in a way that can improve their experience.

How do you enable Accessibility Checker?

Within Excel: File → Options → Accessibility → Make Excel more accessible menu.

HIGH CONTRAST THEMES

High Contrast themes

High contrast themes offer users the ability to enhance the contrast between text, links, buttons, and backgrounds. In Excel users can select different modes such as dark, grey, or white and personalize their user interface to suit their preferences and needs.

High Contrast themes

Windows 10 & 11 provide additional high contrast themes for users. In Windows 11, Microsoft has taken it a step further by introducing 4 new high contrast themes that can be customised, to improve visibility and overall aesthetic appeal.
To open Accessibility settings in Windows:

⊞	U

To turn on and off high contrast theme:

Alt	Shift	PrtScn

TEXT TO SPEECH TECHNOLOGY

Speak cells

Speak cells is a tool embedded within Excel, employing text-to-speech technology to transform text into natural-sounding speech.

Speak cells
Users can choose a specific cell, a range of cells, or even the entire worksheet to be read aloud.

Stop Speaking cells
To stop the speech function, users can either select the stop speaking button or simply click on any cell within the worksheet.

Stop on Enter
The Speak on enter feature, reads out every data entry made when the Enter key is used.

Narrator

Narrator is similar feature to Speak cells but operates at the system level. The Narrator goes beyond reading text to reading other on-screen elements, such as buttons. This feature can integrate with Excel and is accessible to both Windows 10 and 11.

To open Narrator settings:

| ⊞ | Ctrl | N |

To enable Narrator and to turn off the Narrator:

| ⊞ | Ctrl | Enter |

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MAGNIFIER & VISIBILITY FEATURES

Zoom slider

To adjust the zoom level of a spreadsheet, users can use the zoom slider located in the bottom-right corner of the Excel window.
The zoom percentage ranges from 10%-400%, typically set to 100%

Additional Visibility features

Within Windows 10 & 11 users can also:
- Change size of text, percentage ranges from 100%-225%
- Adjust screen brightness
- Personalise Windows experience (e.g., hide scroll bards, show animations, etc.)

Magnifier

Magnifier enables users to adjust the zoom level of the entire screen including other elements such as buttons, making content more easy to read and interact with. Within Magnifier settings users can:
- increase screen size up to16 times the original
- enable automatic activation
- adjust magnifier behaviour
- combine with text–to-speech

To open the tool directly through the Settings app:

Ctrl **M**

To open a compact dialogue box showcasing the main features of the tool:

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BEST PRACTICES

Add clear and descriptive names for cells and sheets

Add contrast using fonts, colours and cell styles

Add Alt text

Provide instructions if user input is required

Use simple table structures

Start at cell A1

Provide description of destination target when using hyperlinks

Check Accessibility Checker

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Any Questions?

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