



HOW TO USE MICROSOFT VISIO IN YOUR TECHNICAL WRITING

An Introductory User Guide by Meredith Wood



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Introduction

Microsoft Visio is a diagramming tool that helps technical writers (and members of many other professions) create visual aids, which can drastically simplify an explanation of how to use a product or service. Conciseness, clarity, and accuracy are key elements of technical writing, and a good diagram can help you realize those goals more fully. Implementing diagrams appropriately can save you time to focus on areas which need a thorough written explanation.

The following list presents a few examples of visuals that you might need to create as a technical writer:

- Decision-making flowcharts
- Network diagrams
- UML diagrams
- Brainstorming maps

Program Overview

Visio's template versatility makes it useful both during the brainstorming phase of a project and in the creation of a visual that you can include in the final version of the project. In fact, as per Microsoft's website, Visio's three main applications are in the creation of diagrams, 'flows,' and planning [tools].

In short, Visio has several capabilities and features that make it an excellent tool to have in your belt – it's up to date on Business Process Model and Notation (BPMN) industry standards, for instance, and you can integrate it with other apps such as Power BI or Teams to enhance its functionality, especially in automating processes and co-authoring in real time.

Microsoft also offers a few different Visio plans so that you can pick the version of the application which will suit your project best. *Appendix A* contains a comparison on the differences between these plans and versions of Visio. Before that, though, this guide will introduce you to the web version of Visio and teach you how to set up a hub and spoke model, a flowchart, and a Venn diagram.

Navigating the Home Screen

When you launch the web version of Visio, you will arrive at the home screen, depicted in *Figure 1*.

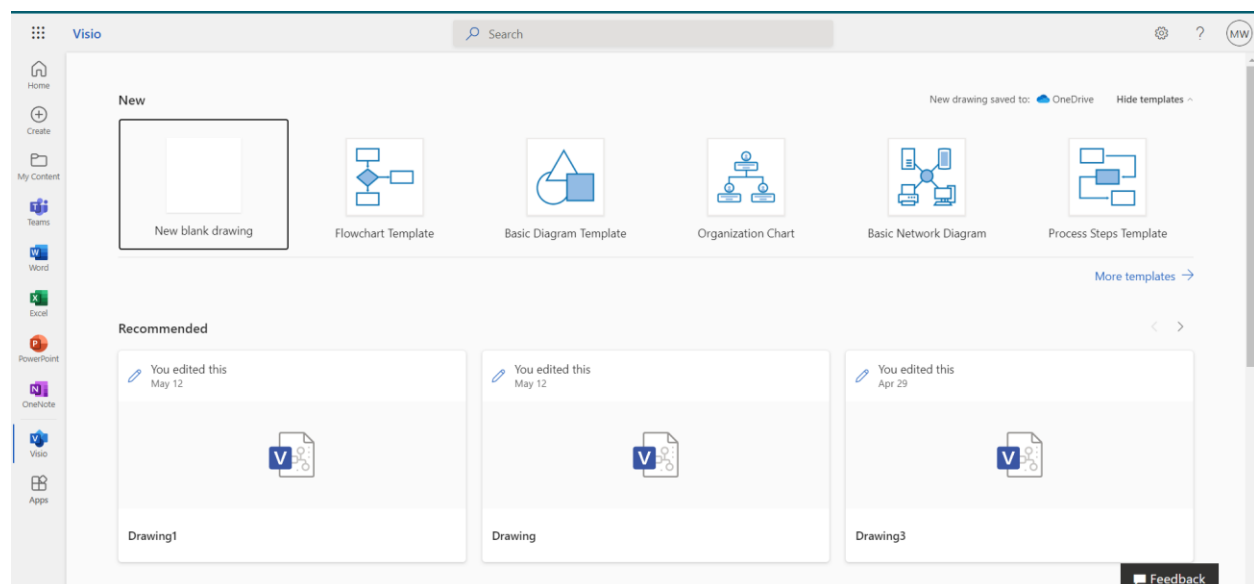
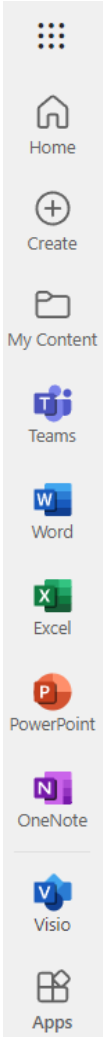


Figure 1: Microsoft Visio Home Screen



On the left side of the home screen is the **Microsoft Office Toolbar**, which you may not see unless you have Visio through the Microsoft Office 365 plan. This toolbar lets you quickly switch to other Microsoft apps and manage your project creation throughout the entire Microsoft Office suite.

At the top of the screen is a search bar, and in the top right corner, you can find the program settings, a help bar, and your account profile. In the settings menu, one of the things you can do is change the language or time zone that you want the program to use. The help panel will show you how to execute simple functions in Visio, such as adding and connecting shapes. Finally, your account profile will let you either access your account information or sign into a different account.

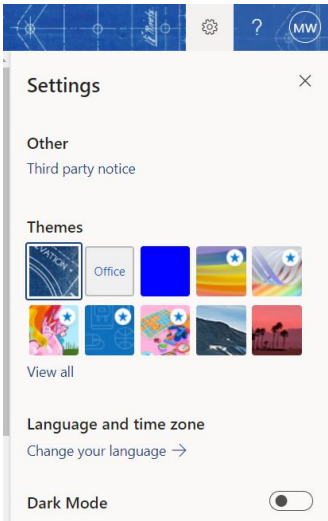


Figure 2: Settings Menu

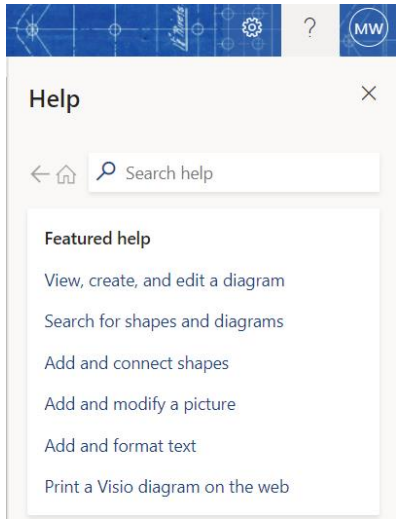


Figure 3: Help Panel

In the **New** category on the top third of the screen, Visio recommends some popular templates to help you get started in creating a new project. It also provides a blank drawing option, and a *More templates* hyperlink that will let you see an expanded list of templates.

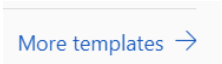


Figure 5: More Templates Hyperlink

In the **Recommended** category located on the bottom of *Figure 1*, Visio will start a collection of the most recent projects that you’ve worked on. If you scroll a little bit further down the screen, you will see a list version of your most recent projects, and an additional list of search filters to help you locate the exact project you’re looking for, new or old.

<div> <div>All</div> <div>Recently opened</div> <div>Shared</div> <div>Favorites</div> </div> <div> <input type="text" value="Filter by keyword"/> <div>Filter</div> <div>Upload</div> </div>			
Name	Modified	Owner	Activity
Drawing1 Meredith Wood's Files	May 13	Meredith Wood	You edited this
Drawing3 Meredith Wood's Files	May 13	Meredith Wood	You edited this
Drawing2 Meredith Wood's Files	May 13	Meredith Wood	You edited this
Drawing Meredith Wood's Files	May 12	Meredith Wood	You edited this

Figure 6: Search Filters in the Recommended Category

Figure 4: M. Office Toolbar

Ch. 1: Setting up a Project from a Template

There are 11 template categories to choose from in Visio. All told, these are:

- | | | |
|------------------------|----------------------|---------------------------|
| 1. Basic Diagrams | 5. Basic Network | 8. Venn Diagrams |
| 2. Basic Flowcharts | Diagrams | 9. Cycle Diagrams |
| 3. Organization Charts | 6. Process Diagrams | 10. Pyramid Diagrams |
| 4. Block Diagrams | 7. Business Matrixes | 11. Infographic Timelines |

So how do you know which one to choose for your project? The good news is that these are still just templates, meaning that even if you pick one that is a bit ill-suited for the scope of your project, you can customize it. Templates are mainly there to provide a starting reference point and automate some of the tedious form creation that comes with setting up the same kind of diagram repeatedly.

We will set up our own example project in Visio to better understand how to customize a project using a template as a base. For this example, we are going to use the **Hub and Spoke Model** template.

A hub and spoke model is a diagram that demonstrates how several small regional distribution centers (spokes) connect to one big national distribution center (the hub) to organize the flow of products or connect customers to a location which offers the service they are looking for. Two examples of industries that use the hub and spoke model are the air travel industry and the shipping industry.

Consider restaurant chains as well – each restaurant started out in one central location, and then chains spread out across the surrounding area to offer service to more customers. In our example, we will depict how a few local Austin MAD Greens chains connect to the restaurant's central Austin location – and how that location connects to the original store in Colorado.

Opening a Template

To initialize our document, we must first select and open the template we would like to modify.

Reference *Figure 7* for a guideline and perform the following steps:

1. First, click *More templates* to pull up the full list of categories on your screen.
2. Click *See All* at the top right of the **Basic Diagram** category or click the rightward-facing arrow on the right-hand side of the category to locate the correct template.
3. Press the *Create* button to open the template in a new Visio canvas.

Note: The document will save automatically in the web version of Visio. Regardless, every so often it is prudent to save your work manually (*Ctrl + S*).

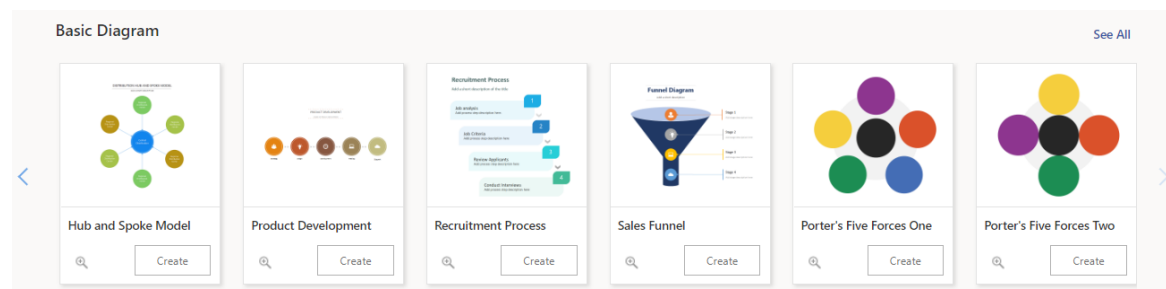


Figure 7: Hub and Spoke Model in the Basic Diagram Category

Replacing the Placeholder Text

Now that we have the template loaded in successfully, we'll remove the irrelevant text and put in our own. These are the steps you must take to replace placeholder text in Microsoft Visio:

1. With your cursor, hover over the node containing the text you want to replace.
2. Double-click the node in quick succession to open the textbox.
3. Type in your replacement text.
4. Click anywhere on the screen outside of the textbox field to close it.

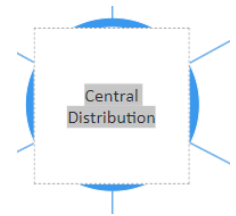


Figure 8: An Open Textbox

To update the default model so that it better reflects the scope of our project, apply the strategies from the list above to perform the following changes:

1. Change the model's title from "Distribution HUB And Spoke Model" to "MAD Greens HUB And Spoke Model."
2. Fill in the short description located underneath the title with the text "Branch Locations Reporting to Central."
3. Replace "Central Distribution" with "Colorado" in the node at the very center of the model.
4. Change the text "Regional Distribution Center" in two of the supporting spokes to "Arizona" and "Texas" respectively.

When you have completed these changes, your model should mirror *Figure 9* below.

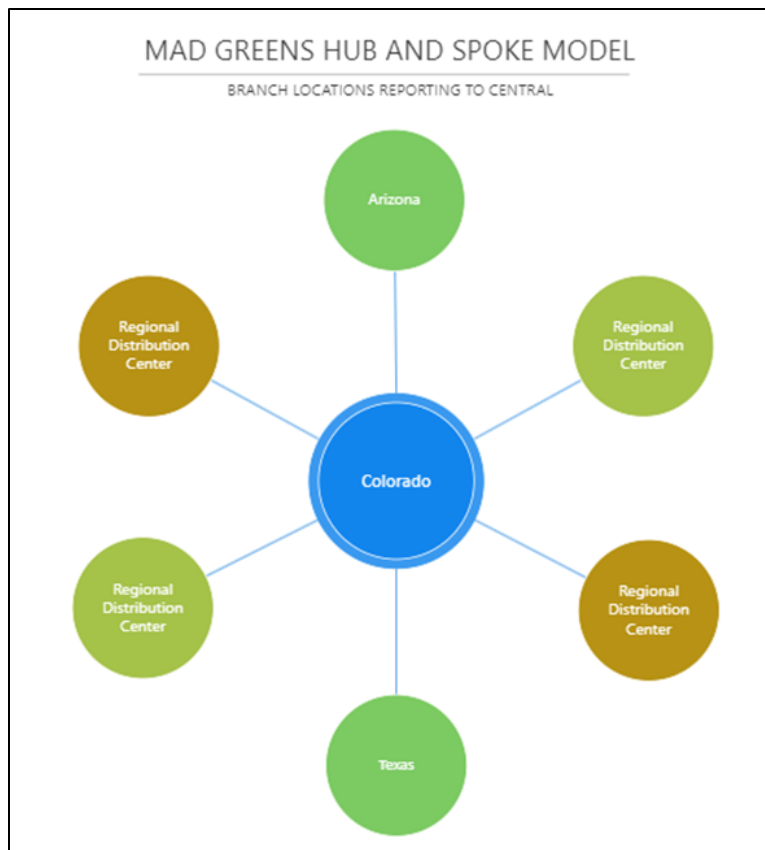


Figure 9: Nodes Established

Removing Extraneous Nodes

As you may have noticed in the image above, we have four supporting nodes (or “spokes”) that we are not using. Follow these steps to delete each of the unnecessary nodes:

1. Left click the node that you wish to delete to make sure that it is selected.
2. Next, right click the node and select *Delete* from the drop-down list.

Note: Each node consists of three elements: shape, textbox, and connective line. To simplify the deletion process, you will want to double-check that you have all three parts of the node included in your selection. So, after you’ve left-clicked the node you want to delete initially, make sure that the circles that appear in your selection box are completely empty. If the circles have a grey slash through them, this means that only the shape and the textbox are selected. If this is the case, simply left click the shape again to add the line to your selection.

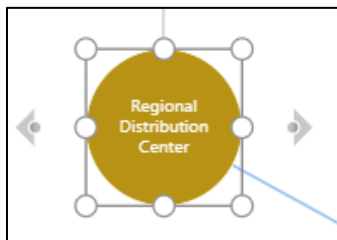


Figure 10: Selection in Need of Correction

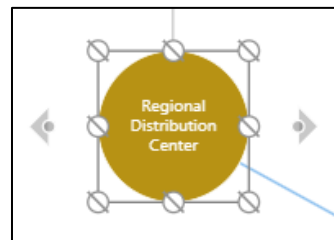


Figure 11: Selection with Slashes Included

We you have finished with the steps above, we should only have three nodes remaining: Colorado, Arizona, and Texas.

Adding Subordinate Nodes

The last task we need to complete for our project is to add the Austin MAD Greens locations as subordinate nodes splintering off the **Texas** node. To add these subordinate nodes to your model, reference *Figure 12* for additional clarity, and complete the following steps:

1. Hover over the **Texas** node with your cursor until four grey directional arrows appear.
2. Move your cursor over the directional arrow to the right of the **Texas** node and select the circle shape from the small menu that appears.
3. Double-click the new circle node that you added to open its textbox.
4. Type in “Austin Lakeline” to give the new supporting node a label.
5. Click anywhere outside of the textbox to close it.
6. Next, right click the “Austin Lakeline” node to open the drop-down menu.
7. Click the arrow next to *Shape Fill* to open that menu as well.
8. From the shape fill menu, select *Accent 4* to change the color of the subordinate node.
9. To resize the subordinate node, grab one of the corner boxes of the selection, drag your mouse diagonally towards the opposite corner of the circle, and then release your mouse.

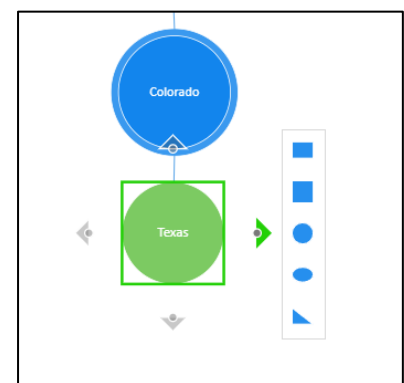


Figure 12: Creating a Subordinate Node

Repeat these steps two more times to add the other two supporting nodes around the **Texas** node. The only deviations you should need to make from the list of steps above are to select a different directional arrow extending from the **Texas** node, and to change the label text from “Austin Lakeline.”

The two new labels you add should be:

- “Austin Bergstrom International” – add this node to the south of the **Texas** node.
- “Round Rock” – add this node to the left of the **Texas** node.

Repositioning Nodes and Changing Font Size

You may need to rearrange the nodes a little so that they do not carry over to the next page. To do so, select each node and drag it with your mouse to the place where you would like to reposition it.

We should also change the font size of the **Texas** and **Arizona** nodes so that all the text is the same size. To do so, complete the following steps:

1. Double-click the node to open the textbox.
2. Press *Ctrl + A* on your keyboard to select all the text within the textbox.
3. Select the drop-down arrow next to the **Font Size** box located inside the toolbar at the top middle of the screen. Change the font from “12” pt. to “10” pt.

When you’ve repositioned the nodes and decreased the font size, your model should mirror *Figure 13*.

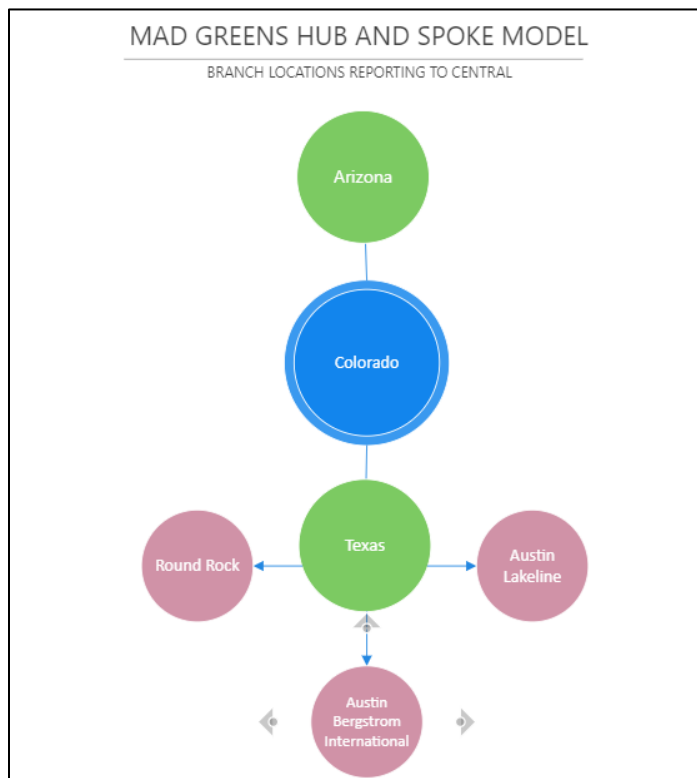


Figure 13: Finished Model

Congratulations! You’ve created your own diagram from a starting template. Reference *Ch. 3: Exploring Menu Options* or *Appendix B: Further Reading* to learn what else you can do with your new diagram.

Ch. 2: Starting a Project from a Blank Document

Creating a project from a blank document is a great way to learn all of Visio's tools. Within this chapter, we'll set up an example flowchart to demonstrate how to construct your own visual aids from scratch. The topic of our flowchart will be decision-making steps when editing a document for peer review.

Flowcharts are visual aids that catalogue the steps in a process chronologically. They can also display how each step can re-route to other steps dynamically – i.e., when there is a yes or no answer to a step, the chart must diverge to accommodate the different answers. As such, flowcharts are often seen in troubleshooting and other areas of process documentation. They can be used to categorize department responsibilities in a workflow, to provide onboarding for a new type of task, and much more.

Components of a Flowchart

Before we can create a flowchart, we first need to know what all the symbols mean. Our hub and spoke model consisted primarily of circles and arrows, but flowcharts typically include start and end points, decisions, processes, and much more. *Figure 14* below will identify the basic elements of a flowchart.




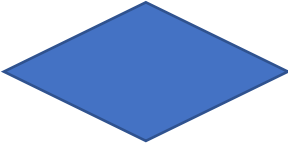

Symbol	Meaning
	Ellipses are used to mark the start and end points of a flowchart. These points are sometimes referred to as “terminators.” They are meant to give users a clear indication of when to start paying attention and when to stop.
	Arrows act as connectors between the steps in a flowchart, indicating what order to complete the tasks in and which shapes relate to one another. Connectors add context to the rest of the flowchart, demonstrating relationships between information.
	Rectangles represent processes – i.e., the individual steps a user will take to execute the overall function the flowchart is meant to teach them how to do. In other words, a process tells the user what kind of action they'll need to take to proceed. “Draw a rectangle” is one example.
	Diamonds represent a decision point (answerable by a yes or no question) in the flowchart which may reroute the user from the mainline path. In some cases, the splinter path may eventually rejoin the mainline path.
	A rectangle with two dividing lines is referred to as either a “subprocess” or a pre-defined process. A pre-defined process appears earlier in the flowchart as a process node, whereas a subprocess is a sub-step compared to a process node.

Figure 14: Common Flowchart Symbols

Initializing the Workspace

From Visio's home screen, click *New blank drawing* to open a new document. You can also click *Open in Desktop App* if you would prefer to work on your document with the Visio application itself, but for this project, we'll stick with the web version of Visio.

The first thing we'll check is the size and orientation of our workspace. This is typically set up for us automatically when we open a new document, but it's still a good idea to familiarize yourself with these settings in case you'd like to change them later. Follow these steps to set up your workspace in preparation for the flowchart:

1. Click the *Design* tab in the top left toolbar.
2. Click the arrow next to **Orientation** to open the drop-down menu and select *Portrait* from the options.
3. Click the arrow on the right of **Size** to open the drop-down menu and click *Letter* to select it.

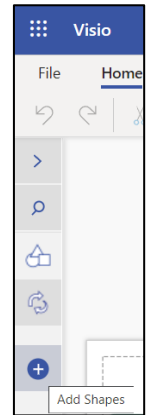


Figure 15: The Palette

Next, we'll want to add basic flowchart shapes to our quick toolbar, located on the left edge of the screen. This toolbar, visible to the right in *Figure 15*, is called the **Palette** in Visio. Adding flowchart shapes to it will enable us to select industry standard shapes without having to search for them every time we need a new instance.

To add flowchart components to your palette, perform the following steps:

1. Mouse over to the bottom of the palette and click *Add Shapes* to bring up the menu.
2. Scroll down to **Basic Flowchart Shapes** and click the *Add* button (see *Figure 16*).

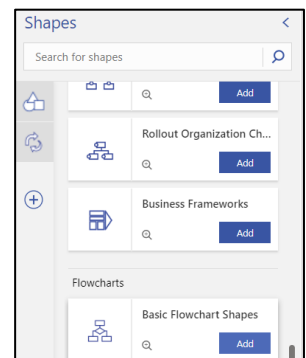


Figure 16: Adding Flowchart Shapes

Adding Shapes to Your Flowchart

First, we'll want to add our starting point to our flowchart. Complete the following:

1. In the palette, click *Basic Flowchart Shapes* to open the menu.
2. Click and hold down on the *Start/End* shape to drag it across your screen, then let go of your mouse to drop the shape at the top of your workspace.

Note: After you place the shape, you may find that it looks quite small on your screen. Click the **+** (plus) icon on the bottom right of the workspace to zoom in on the document and get a better view of what you're working on. You can click the **-** (minus) icon to zoom back out or use the **Slider** to adjust your overall zoom ratio. Finally, you can click *Fit page to current window* to fit the entire flowchart on your screen so that you can see everything at once.

3. Double click the shape to open the textbox, and type "Start" as the label.
4. Click somewhere outside of the textbox to close it.

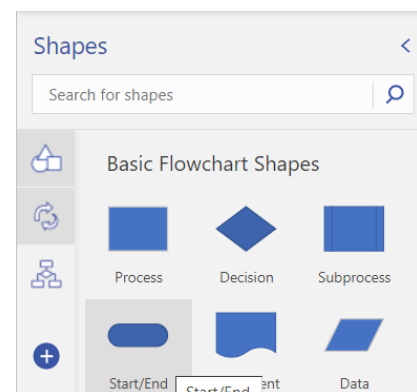


Figure 17: Adding the Terminator

Repeat this process as necessary to add the rest of the steps to the flowchart, being careful to use the correct shapes depending on what type of step the entry is. Remember, after you have configured the initial starting point of the document, you can skip steps 1 and 2 by hovering over one of the directional arrows relative to the node and selecting the type of shape you want to insert next (see *Figure 12*). This will also spare you from having to go back and add in connective arrows manually.

Reference the following list to finish filling out the flowchart:

1. To the south of the **“Start”** node, add a process node with the label “Open the document you need to review.”

Note: You do not need to punctuate the labels in the flowchart.

2. To the south of the **“Open”** node, add a process node with the label “Read the prompt or style guide relevant to the assignment to gather your review context.”
3. To the south of the **“Read Prompt”** node, add a subprocess node with the label “Read through the entire piece once to get a feel for its tone, mood, scope, and goal.”
4. To the south of the **“Entire Piece”** node, add a decision node with the label “Do you have any questions for the author?”
 - a. To the left of the **“Questions”** decision node, add a process node with the label “Write them down to ask later.”

Note: Leave this node alone for now, we will reconnect it to the mainline flowchart later.

5. To the south of the **Questions** decision node, add a process node with the label “Check formatting.”
6. To the south of the **“Formatting”** decision node, add a subprocess node and label it “Run spelling/grammar check.”
7. To the south of the **“Grammar”** subprocess node, add a process node labeled “Read through the document again, noting any critiques as you go.”
8. To the south of the **“Critiques”** node, add a process node labeled “Compile your comments about the big picture of the piece.”
9. To the south of the **“Comments”** node, add a process node labeled “Send your feedback to the author and provide times you will be available to discuss questions.”
10. To the south of the **“Feedback”** node, add a start/end node labeled “End.”

Now we need to go back in and add an arrow connecting the **“Write Them Down”** subprocess node with the **Formatting** decision node. Follow these steps:

1. Click the **Write Them Down** node once to select it.
2. Click on the white circle at the bottom of the node (which appears after you select it). The circles should now turn green when you hover over the node. Reference *Figure 18* and *Figure 19* to observe the difference between the circles when they are white or green.

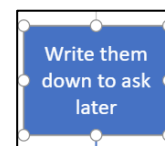


Figure 18: White Circles

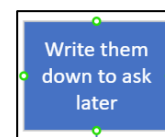


Figure 19: Green Circles

- Click and hold your mouse over the bottom-most circle (making sure that it is green) and drag your cursor over to the **Formatting** decision node until you see “*Glue to Connection Point*” on the left-most edge of the node. Reference *Figure 20* for a visual.
- Release your mouse and watch the arrow connecting the nodes take shape.
- Click away from the arrow to de-select it.

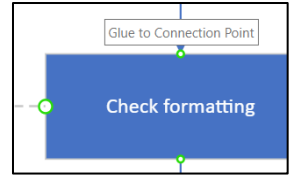


Figure 20: Glue to Connection Point

We should also label the two diverging paths from the decision node. Follow these steps:

- Within the *Home* tab, click the *Text Box* button.
- Hold down the mouse and drag it down diagonally to create a textbox.
- Type “*Yes*” as the label.
- Move the textbox so that it is just above the arrow connecting the decision node and **Write Them Down**.

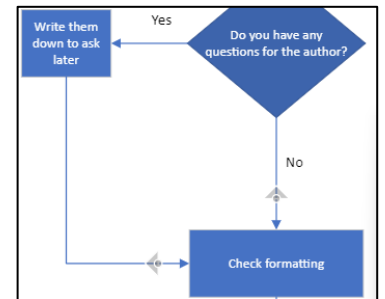


Figure 21: Yes/no Captions

Repeat these steps to do the same for the arrow connecting the decision node and the **Formatting** node. Make sure to label this textbox “*No*.”

You may have noticed as you were adding nodes that some of them carried over to the next page. We can get the whole flowchart on one page by resizing some of the nodes and repositioning them on the canvas. Arrange your flowchart any way you like. Your workspace should look something like *Figure 22*.

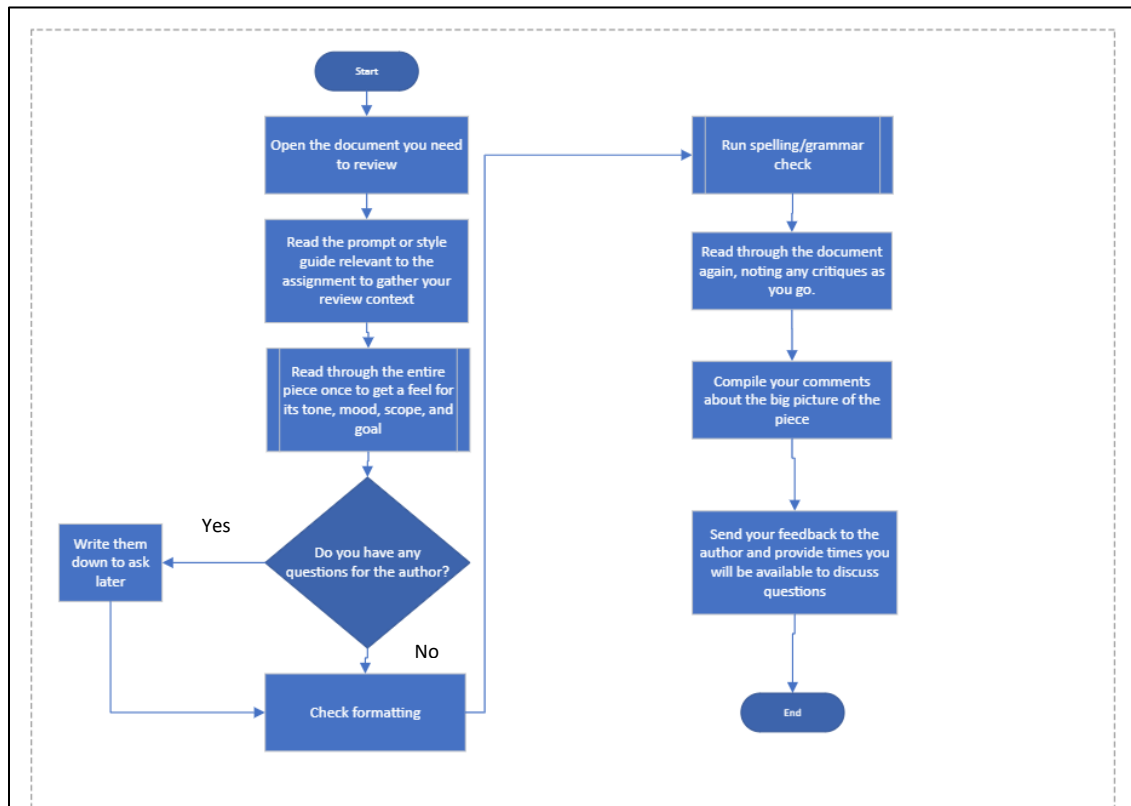


Figure 22: Flowchart Check-In

Changing and Deleting Shapes

Once you've made your flowchart, you may decide that you want to change the way it looks, or that you want to delete a step that seems superfluous.

To begin with, we'll change **Read Prompt** to a subprocess node instead of process node. Complete the following steps:

1. Click the **Read Prompt** node once to select it.
2. Right click the node to open the menu and click the arrow to the right of *Change Shape* to open that menu as well.
3. Select the subprocess node, and watch the change occur instantly.

Now, let's say that we wanted to delete the **End** node. Here are the steps we would take:

1. Click the **End** node once to select it.
2. Right click the node to open the menu and select *Delete* from the list.

Use the keyboard shortcut *Ctrl + Z* to undo the deletion of the **End** node for the purposes of our example project. You can also use the *Undo* arrow (located on the top left side of the screen) to return to your last step, just before the change was applied. Similarly, you could use a combination of the *Redo* arrow (located next to **Undo**) and the *Undo* arrow to swap back and forth between applying the change and removing it—if, say, you wanted to compare how the canvas would look with and without the **End** node.

Personalizing Your Flowchart

The shape of our flowchart is finalized, but it still has the standard Microsoft Visio template colors. For a quick look improvement, we'll change the template's theme. Complete the following steps to do so:

1. Click the *Design* tab in the topmost toolbar.
2. Click the arrow next to *Themes* to expand the drop-down menu.
3. Apply the *Parallel* theme.
4. Click the arrow to the right of *Theme Colors* to expand the drop-down menu.
5. Select *Zephyr*.

We can also adjust connector style and diagram layout—plus resize the workspace to fit the shape of the diagram exactly. To adjust connector style and diagram layout, follow the steps laid out in this list:

1. Select all the nodes in the flowchart by using the keyboard shortcut *Ctrl + A*.
Note: If you only wanted to select part of your flowchart, you could do so by clicking and holding down your mouse, then dragging it across the screen. This enables you to set the start and end points of your selection box manually.
2. Click the arrow to the right of *Connectors* and select *Straight Lines* from the drop-down list.
3. Select the lines coming in and out of the **Formatting** node individually and change them to *Right Angle* (located in the same drop-down list).
4. Click the arrow next to *Diagram Layout* and select *Left to Right* from the drop-down list.
5. To resize the workspace, click the arrow next to *Size* and select *Fit to Drawing* from the drop-down list.

Your flowchart should now look like *Figure 23*, modeled below:

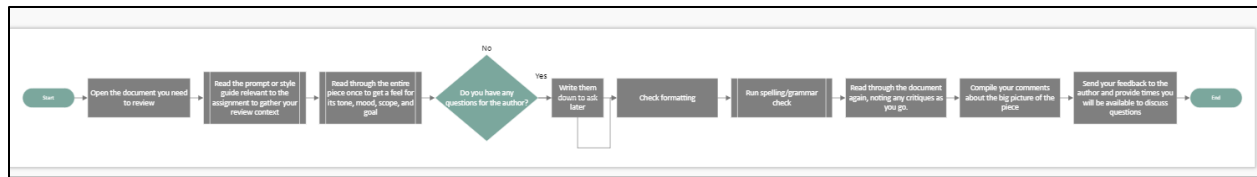


Figure 23: Finalized Flowchart

Sharing Your Document with Others

If you are working on a group project, you may need to add other people to your document so that you can co-author it in real time. To do so, click the *Share* button at the top right of your screen. Click *Share* again within the resultant drop-down menu. Then:

- In the **To:** field, type in the email address of the intended recipient, then click the arrow to the right of the pencil icon and make sure *Can Edit* is selected.
- You can type a brief explanation of the document in the *Message* field to give the recipient context for why you are sending them the document.
- Click the arrow next to **Anyone with the link can edit** to adjust the link's settings, such as who the link will work for and whether you would like to specify a password or expiration date for the link. Be sure to press the *Apply* button to commit your changes.
- To send the link, you can either press the *Send* button, or copy the link to your clipboard and send it to the recipient through other means.

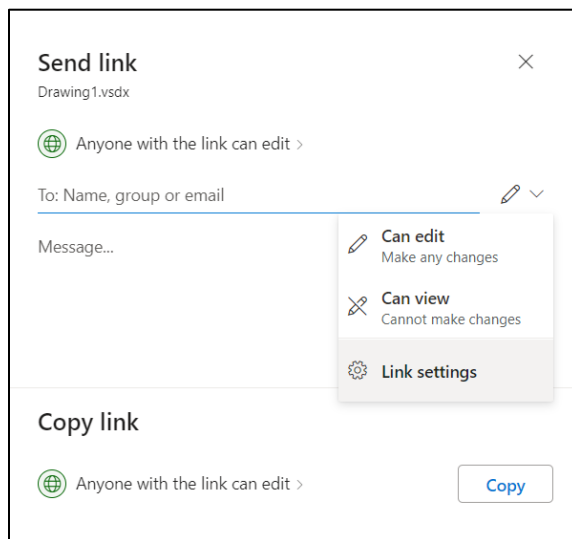


Figure 24: Share Document Window

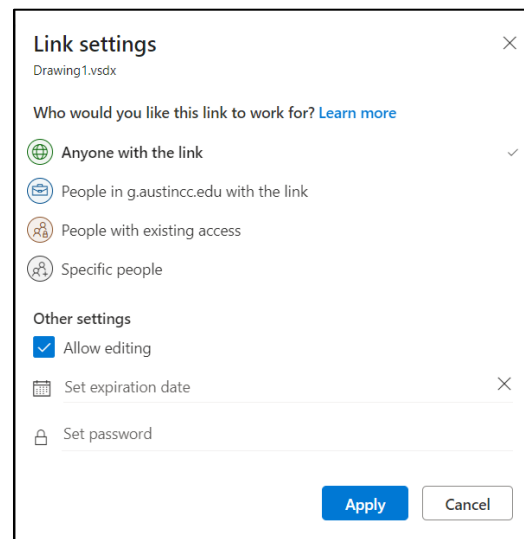


Figure 25: Link Settings

If you share the document with others, then you will also need to know how to review, add, and delete comments. Review the list below to learn some of the basics of commenting on a Visio document:

- Click the *Comments* button on the top right of the screen to open the comments panel.

- To add a comment, click the *New* button, type in your comment, and then press the *Post Comment* button or use the keyboard shortcut *Ctrl + Enter*.
- To view a comment, click the speech bubble icon wherever it appears in the workspace, or open the comments panel like usual.
- To reply to a comment, type in the *@mention or reply field*, then press the *Post Comment* button. You can also press the *Cancel draft* button to change your mind.
- To edit or delete a comment, right click the ellipsis icon in the upper right corner of the comment thread, and then select either *Edit comment* or *Delete thread* as appropriate.

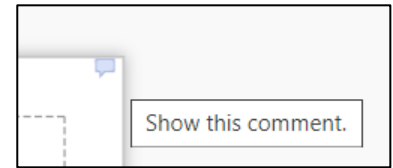


Figure 26: Comment Speech Bubble

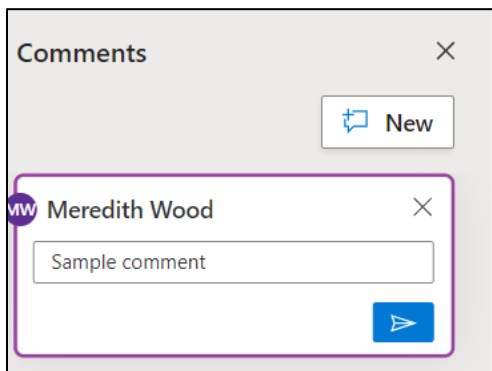


Figure 27: Adding a New Comment

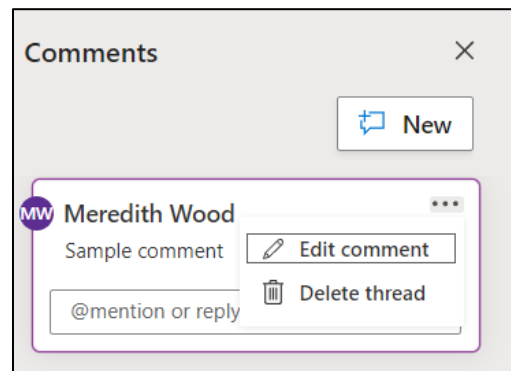


Figure 28: Editing or Deleting a Comment

Ch. 3: Exploring Menu Options

In this chapter, we will explore each of the menu tabs in Visio one by one. For our example project, we will create a brainstorming diagram on the benefits of digital polyhedral dice versus physical polyhedral dice. Following the completion of this project, we will have created an example of each of the three main categories of diagrams as per Microsoft's website: diagrams, flows, and planning [tools].

Brainstorming is typically a behind the scenes process at companies, but it can be very useful for arranging your thoughts on a project. If you plan a project out ahead of time, you will oftentimes end up with a more focused result. This isn't all that brainstorming tools are useful for, however—they can also be used to document comparisons between finished products.

Set up the Initial Diagram

Our first step is to open a Venn diagram template. To do so, follow these steps:

1. From the home screen, click *More templates* to see the full list of options.
2. Scroll down to **Venn Diagrams**.
3. Use the *Create* button to open the very first template, the default **Venn diagram**.

Next, we'll need to establish the shape and contents of the diagram. Complete the following:

1. Within the palette, locate, add, and open the *Venn Diagram Shapes* panel.
2. Click and hold down the mouse while it's hovering over *2-sets Venn diagram with captions*, then drag the shape out onto the middle of the canvas.
3. Double-click the caption on the right side of the diagram to open the textbox and replace the placeholder text with the label "Digital polyhedral dice set."
4. Repeat Step 3 for the caption on the left side of the diagram, changing the placeholder text there to "Physical polyhedral dice set."
5. Now, double-click on the green shape in the overlapping area of the two circles to open the textbox there.
 - a. Enter the following information as a label: "-Contain seven dice -Create a sound when rolled -Come in colorful options."
 - b. Use the *Enter* key on your keyboard to put a line of space between each element beginning with a dash.
 - c. Use the keyboard shortcut *Ctrl + A* to select all the text
 - d. In the *Home* tab, click the drop-down arrow next to *Font Size*, and change all the text to pt. 8 so that it will fit comfortably within the shape of the diagram.
 - e. Click somewhere outside of the textbox to close it.
6. Repeat Step 5 for the blue circle on the right side of the diagram but use the following text as a label: "-Plays a custom animation when you roll a natural twenty -Enables the GM to see your results immediately -Are often cheaper to purchase and featured in sales."
7. Repeat Step 5 for the orange circle on the left side of the diagram but use the following text as a label: "-Text may be poorly printed or even illegible -Come in different color variations due to the creation process, no two sets are alike -May get caught on the side of the dice tray and land between two numbers instead of settling on one number."

Your diagram should look something like *Figure 29* below:

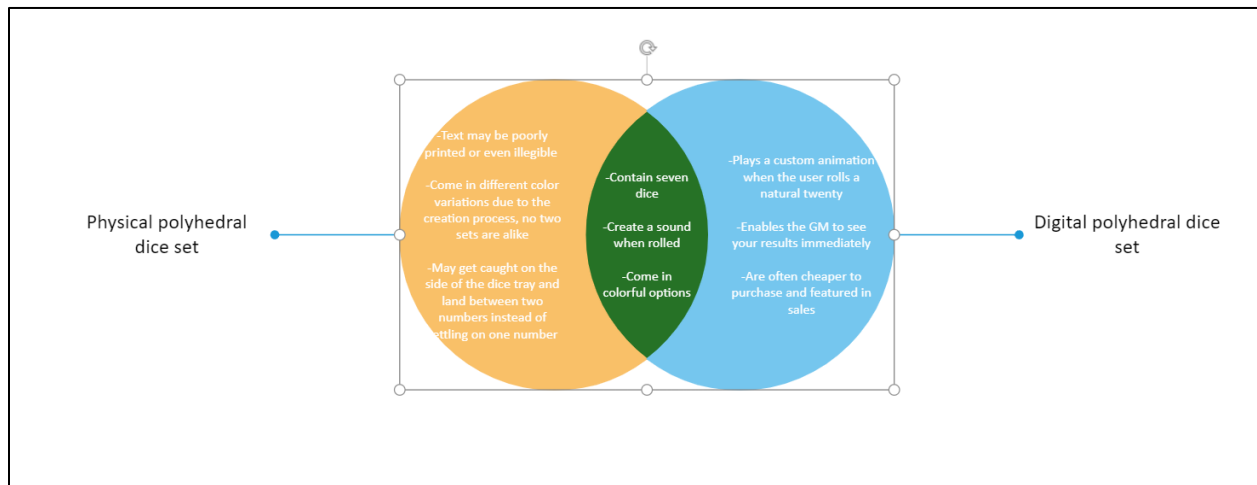


Figure 29: Finalized Venn Diagram

Exploring the Home Tab

Note that the *File* menu contains standard information which is not unique to Visio. As such, we will leave the *File* menu out of this chapter to focus on more important information. Similarly, we will not be covering the *Design* tab since everything there (save for one button) is used in *Ch. 2: Starting a Project from a Blank Document*.

Please note also that we will be focusing on the main four tabs (besides *Design*) that are always visible in the toolbar and not any of the tabs that may pop up (when you open an image or shape specifically, for instance). Finally, the functions of the buttons in the main four tabs will be explained in groups instead of individually, as most of them still provide very standard functions.

With that covered, the first tab that we'll be exploring is the *Home* tab, depicted in *Figure 30* below. Notice how the tool icons are sorted into groups depending on their functionality.

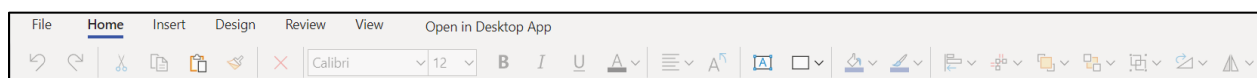


Figure 30: Home Tab Toolbar

- **Undo and Redo** – As mentioned in *Ch. 2: Starting a Project from a Blank Document*, these two buttons can help you either delete a mistake or fix an accidental deletion respectively.
- **Cut, Copy, Paste, and Format Painter** – The *Cut* tool removes an instance from your workspace but saves a copy of it to your computer's clipboard.
 - *Copy* creates a duplicate of the instance on your computer's clipboard.
 - *Paste* adds whatever is stored in your computer's clipboard to the workspace.



Figure 31: Undo and Redo



Figure 32: Clipboard Tools

- *Format Painter* copies the format of a specific instance so that you can easily reapply it elsewhere.
- *Delete* – The *Delete* button will completely remove an instance from your workspace.



Note: The cut tool combines the functionality of both copy and delete.

Figure 33: Delete Tool



Figure 34: Text Decoration Toolbar

- Text Decoration – *Font* and *Font Size* let you customize the text that appears in a textbox, from its overall style to its size.
 - **Bold**, *Italics*, and Underline are standard program functions as well.
 - Text Color lets you change the color of the text.
- *Align and Rotate Text* – *Align Text* enables you to choose whether your text is left-aligned, center-aligned, right-aligned, or justified.
 - *Rotate Text* enables you to automatically rotate a textbox 90 degrees.
- *Create Textbox* and *Draw Shape* – The *Create Textbox* button lets you place a new textbox on the canvas.
 - *Draw Shape* is similar in function, enabling you to quickly insert a basic shape. For more complicated shapes, you will need to reference the palette.
- *Shape Fill* and *Shape Outline* – *Shape Fill* lets you change the color of the interior of a shape, whereas *Shape Outline* lets you change the color of the shape's border.



Figure 35: Align and Rotate Text

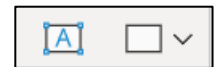


Figure 36: Create Textboxes and Shapes

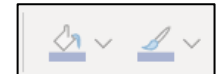


Figure 37: Shape Fill and Outline

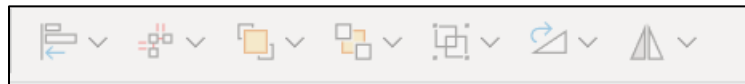


Figure 38: Tools for Use with Multiple Selections

- *Align Shapes* and *Position Shapes* – *Align Shapes* functions similarly to *Align Text*, except that it reorients shapes instead of text.
 - *Position Shapes* enables you to distribute the shapes you've selected either horizontally or vertically, just like you would be able to distribute rows or columns in a table.



Figure 39: Align and Position Shapes

Note: These two tools, as well as the other tools in the *Home* toolbar going forward, require you to capture multiple shapes in a selection before you can make use of them. A good rule of thumb is that if a tool is greyed out, it cannot be used. Reference *Figure 38* versus *Figure 39* to see the difference between a tool that can be used, and a tool that is greyed out.

- *Bring to Front* and *Send to Back* – These functions enable you to arrange the order of instances that are stacked on top of each other. If you dragged a rectangle over the text so that it wasn't visible, for instance, you could use *Send to Back* to make



Figure 40: Layering Tools

sure that the rectangle appears underneath the text. *Bring to Front* would do just the opposite if you had the text selected instead.

- *Group, Rotate, and Flip* – The *Group* button lets you turn several shapes into one selection group, so that you do not have to select them all individually to apply changes to them.



Figure 41: Group, Rotate, and Flip

- The *Rotate* button enables you to rotate shapes in 90-degree increments.
- The *Flip* button lets you flip something either vertically or horizontally.

Exploring the Insert Tab

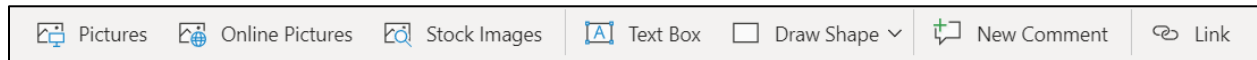


Figure 42: Insert Tab Toolbar

- *Pictures* – The *Pictures* button takes you to a pop-up window that will enable you to upload an image file to your workspace.
 - *Online Pictures* allows you to quickly search through Bing images and select one to insert within your document. The nice thing about this feature is that you can choose to search for images that have Creative Commons licenses specifically.
 - *Stock Images* lets you search for images within Visio's database, and then insert an image of your choosing to the workspace.
- *Text Box* and *Draw Shape* – These two buttons function precisely the same way they do in the *Home* tab.
- *New Comment* – The *New Comment* button will allow you to add a new comment in a location of your choosing. I.e., if you wanted to point out a misspelling in a textbox, you could comment on that exact textbox.
- *Link* – The *Link* button lets you insert a hyperlink within the document. You can specify whether the link goes to a URL, a spot within the document, or even an email address. You can also add display text to the URL.

Exploring the Review Tab



Figure 43: Review Tab Toolbar

- *Check Accessibility* – The *Check Accessibility* button is a neat feature that will inform you about a few common accessibility problems if they appear within your document. Missing alternate text and default page names are a few examples of issues that this panel would alert you of.
- *New Comment* – Functions the same way as it does in the *Insert* tab.
- *Delete Comment* – Lets you quickly delete a comment thread.
- *Previous Comment* -- Lets you cycle back to a previous comment in the document, causing your screen to jump to the position of that comment.
- *Next Comment* – Functions like *Previous Comment* except that it cycles clockwise instead.
- *Show Comments* – The *Show Comments* button allows you to quickly open the comments panel.

Exploring the View Tab

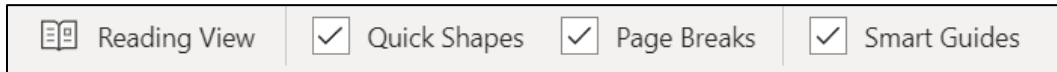


Figure 44: View Tab Toolbar

- *Reading View* – Takes you to a preview screen in which you have limited editing functionality. This screen lets you get a good sense of what your project will look like without guides and aids.
- *Quick Shapes* – Enables you to choose whether you want to be able to insert shapes by hovering over the directional arrows relative to an instance that is already included in the workspace.
- *Page Breaks* – Lets you to decide whether you want to see page breaks in the document.
- *Smart Guides* – Enables you to turn positioning guides on or off.

Glossary

Business Process Model and Notation (BPMN)

– A standard style of graphic that is used to depict the processes and relationships of a business.

Connectors – The arrows that link all the nodes in a flow chart, indicating their relationships to one another.

Decision – A flowchart node type that causes a branch diversion in the main path of the flowchart. Decisions are usually answerable by a yes or no response.

Network Diagram – A depiction of the relationship between the components that make up systems such as computer networks.

Palette – The toolbar located on the left-hand side of the screen in Visio. Offers search functionality and access to a variety of shapes.

Process – A flowchart node type that details a step or activity the user must perform.

Subprocess – A flowchart node that is either a sub-step of a pre-existing node, or a pre-defined (repeated) process.

Terminators – The start and end nodes of a flowchart.

UML Diagram – A type of diagram meant to depict processes and other components that make up a software system. UML stands for Unified Modeling Language, which is a standard form of notation.

.vsd – The file type name assigned to Visio documents.

Appendix A: Comparison of the Visio Plans

Visio is available as part of Microsoft 365, as a monthly subscription, and as a one-time purchase. There are four different program versions: Visio Plan 1 and Plan 2, Visio Standard 2021, and Visio Professional 2021. Plans 1 and 2 are subscription-based, and Standard and Professional are one-time purchase.

Visio Plan 1 includes the web version of Visio only, whereas Plan 2 includes web and desktop. There is a difference of \$10 between the two monthly plans. The major difference between the two plans, however, is that plan 2 incorporates additional features that are exclusive to the desktop application (such as the ability to connect to other Microsoft apps and link to data stored in outside programs).

According to the Microsoft website, Plan 2 also includes additional functionality in the following areas:

- **Intelligent diagramming** (from the inclusion of rulers, layers, and grids to the ability to measure how well your diagrams comply with standard diagram practices)
- **User experience and features** (from shape effects to touch-screen compatibility)
- **Templates, stencils, and shapes** (adds floor plan templates and much more)
- **Accessibility, security, and compliance** (adds the ability to edit files from early versions of Visio, which are called “.vsd files”)
- **Standards support** (adds support for processes like BPMN)

Something else that’s nice about the subscription plans is that you can conduct a free one-month trial before you commit to a purchase. Overall, though, the subscription plans are relatively similar to the one-time purchase plans. Visio Professional 2021 looks a lot like Visio Plan 2, and Visio Standard 2021 is similar to Visio Plan 1. The major difference between the subscription plans and the one-time purchase plans is the cost when considered in the long run. At \$309.99, Visio Standard 2021 is about 61 months of Visio Plan 1. Visio Professional 2021 is \$579.99, which is about 38 months of Visio Plan 2.

Visio Professional 2021 differs from Visio Standard 2021 in the following areas:

- **Standards support** (not included in Visio Standard at all)
- **Intelligent diagramming** (the ability to compare your diagrams against industry standard diagrams)
- **Templates and shapes** (floor plan templates and more, just like in Visio Plan 2)
- **Collaboration and sharing** (the ability for multiple people to work in the document and see where their co-authors are making changes)
- **Connecting diagrams to data** (the ability to link and auto-refresh data from outside sources)

In the end, the correct version of Microsoft Visio for you depends upon three factors:

1. What program capabilities you’ll need to create effective diagrams
2. How frequently you will be using the program throughout the year
3. The total number of years you will be using the program

If you will be using the program for a long time to come, a one-time purchase option may be worth the investment. Otherwise, one of the subscription plans is likely a better option, or even the package deal with Microsoft Office 365.

Appendix B: Further Reading

BPMN

1. [How to Use BPMN](#)
2. [Creating a BPMN-Compliant Process](#)

Brainstorming

1. [Creating a Diagram](#)
2. [Tools for Making Diagrams](#)
3. [How to Use Brainstorming Software Effectively](#)

Organization Charts

1. [Creating an Organization Chart](#)
2. [Autogenerating an Organization Chart](#)

Process Mapping

1. [What is Process Mapping?](#)
2. [Creating a Process Diagram](#)
3. [Common Types of Flowcharts](#)

UML Diagrams

1. [Creating a UML Diagram](#)
2. [Creating a UML Sequence Diagram](#)