

Creating flowcharts in Visio

Flowcharts are easy to create in Visio, which provides flexibility to link to other flowcharts as well as to the documents used in the described process.

This tutorial covers the following topics:

Creating a flowchart

- Basic flowchart shapes
- To drag shapes to the drawing pane
- To connect shapes with connectors
- To use a decision diamond
- To add more shapes
- Remember to save the document regularly.

Improving the layout of a flowchart

- To change the size of shapes
- To move a shape to a new position
- To select more than one shape at a time
- To glue connectors dynamically
- To align shapes

Adding text and a logo to the page

- To add a title to the top of the page
- To create a background page for this and other flowcharts
- To link a background to a page
- To save as a template

Creating links to other pages and documents

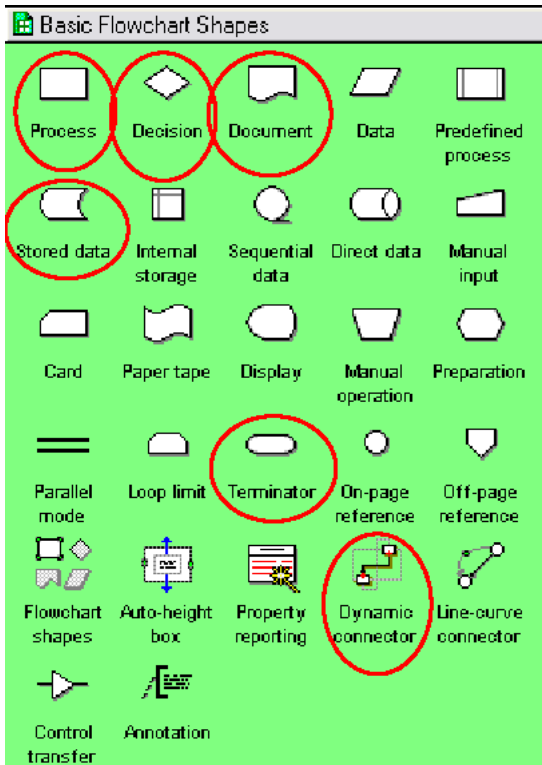
Saving the document in other formats

The Help section in Visio is excellent. Use it to get further into the many nooks and crannies that Visio offers!

Creating a flowchart

When you open Visio, create a new *Basic Flowchart*. The screen that opens shows a drawing pane and a library of shapes that you can use to create the flowchart.

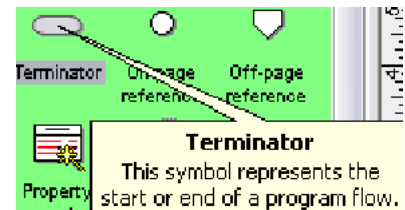
In this tutorial, you learn to create a very basic flowchart, which will teach you most of the things you need to get started. After that, you can experiment with the other shapes, backgrounds and borders, as well as other diagram types as you need them.



Basic flowchart shapes

The screen shot to the left show the library of basic flowchart shapes. When you hold your mouse over one of the shapes, you see a call-out with an explanation of how it is used. The circled shapes are the ones you will probably use most often.

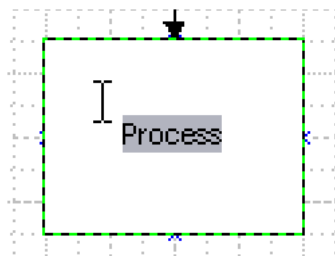
Every flowchart starts and ends with a terminator, which you see here with its call-out.



To drag shapes to the drawing pane

- 1 To start the flowchart, drag the *Terminator* over to the drawing pane, a little down from the top and center of the page.
- 2 Drag a *Process* shape into the pane, a little under the terminator.
- 3 Double click the Terminator and type in the name of the procedure.
- 4 Double click the Process box and write the first process as a *Command* sentence: “Do this.”

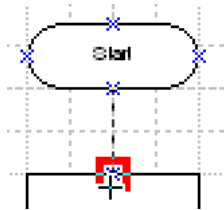
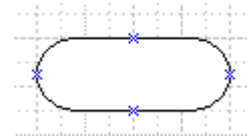
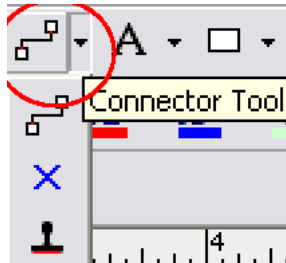
You can change the font family, size and color from the toolbar at the top, just as in WORD.



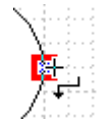
To connect shapes with connectors

Notice that a selected shape has small green boxes, called *handles*, at its edges. Drag on the handles to change the dimensions and size of the shape.

When the shape is not selected, the handles become blue x'es, called *collectors*. If you do not see them, select *Connection Points* in the *View* menu.

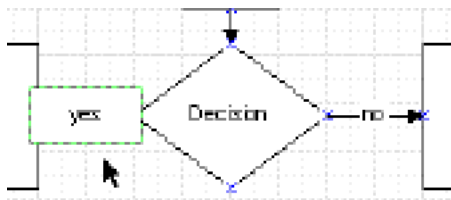


- 1 On the toolbar, click the connector tool. The cursor looks like the picture at the right.
- 2 Click the lower blue connection point on the Terminator. A red box appears around the connection point to show that it is “glued” to it.
- 3 Drag the line to the topmost connection point on the Process box to create the connector.



To use a decision diamond

Decision diamond boxes are used if the flowchart branches in two different directions. The text in the box should be a question that can be answered with yes or no, or two other simple answers. It has 2 connectors leading from it to the two option processes. The answers yes and no are written on the connectors. Sometimes the no connector leads back to a previous process to start over again.



- 1 Drag a decision box to a position under the process box.
- 2 Connect the 2 boxes.
- 3 Drag 2 process boxes to either side of the decision box and connect them.
- 4 Double click the connectors and type yes and no in the text box that appears.



To add more shapes

Add more shapes to the flowchart to represent the process.

- 1 If a process produces a document, use the Document shape.
- 2 If it results in a computer registration, use a data shape.
- 3 Always end all options of the flowchart with a terminator.
- 4 If the process moves on to another procedure, end it with a terminator with the name of the next procedure.
- 5 Annotation shape is actually a text box. Connect its line to a box, drag it into position and write a comment to the box.
- 6 The line-curve connector creates curved connecting lines, but they do not have the dynamic features of the regular connector. (See “To glue connectors dynamically” on page 6.)

Remember to save the document regularly.

It is saved initially as a Visio *.vsd* file, which can only be accessed through Visio.

To enjoy the full functionality of a Visio document, it must be viewed in either Visio itself or the new *Visio Viewer*. You can download the viewer from the Microsoft download center (search for Visio) at: <http://office.microsoft.com/downloads/2002/vViewer.aspx>.



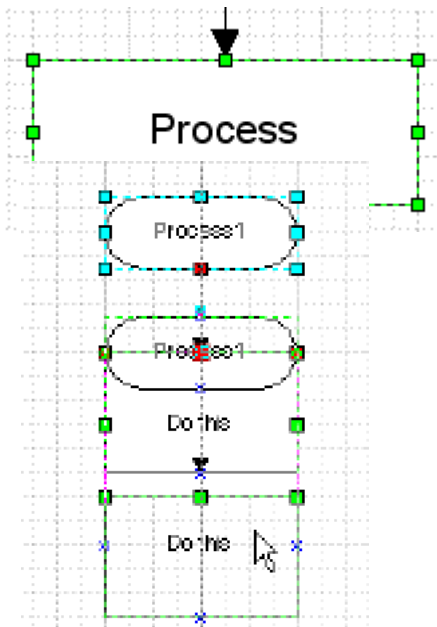
When you have completed the document, you can save it in other formats. (See “Saving the document in other formats” on page 11.)

Improving the layout of a flowchart

When you have added a number of shapes to the flowchart and connected them, some of them will not be aligned properly, or boxes may be the wrong size.

To change the size of shapes

- 1 Click a shape to select it. Click and drag a green handle to stretch or shrink the box.
- 2 Drag from a corner to change both dimensions at once.
- 3 To keep the same proportions, hold the *Shift* key down while you drag.

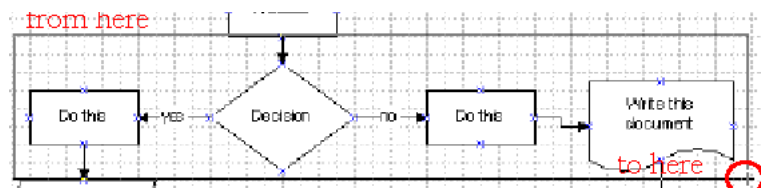
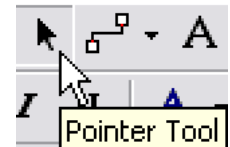


To move a shape to a new position

- 1 Click a shape to select it, or select several as described below.
- 2 Hold the cursor over the selected shape, but not at an edge, so that the cursor becomes white.
- 3 Drag the shape or group of shapes to the new position.

To select more than one shape at a time

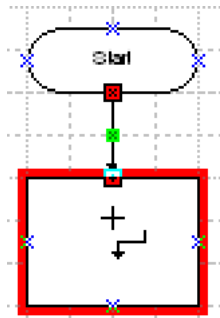
- 1 Using the pointer tool, drag a square around the shapes to be moved.



- 2 When you release the cursor, the selected shapes have green or blue handles. The one with the blue handles is the first to be selected, and is the considered the dominant shape when you align shapes. (See “To align shapes” on page 7.)

To glue connectors dynamically

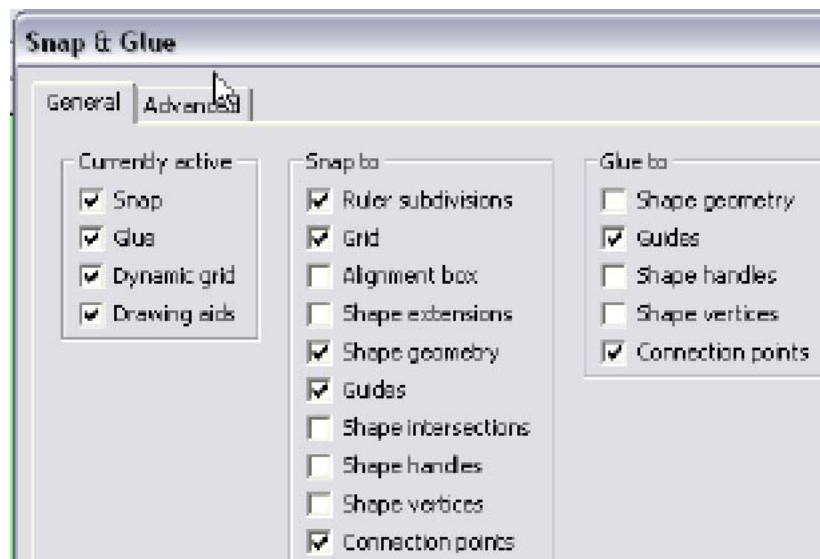
When you move shapes, the connectors stay glued to them. However, their positions may not be appropriate any more. When you glue them dynamically, they move around to the most appropriate connection points.



- 1 Select a *connector* by clicking it.
- 2 Drag one end of the connector into the shape. The entire shape gets a heavy red outline to indicate that it is connected dynamically.
- 3 Repeat with the other end.

Now see what happens when you move one of the boxes in relation to the others.

The *Snap & Glue* dialogue box on the Tools menu gives you a number of options to try.



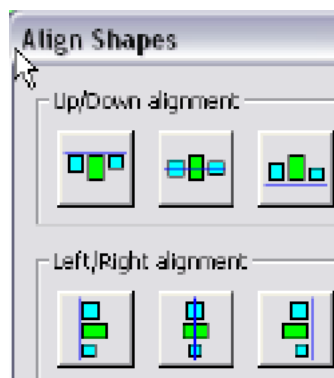
To align shapes

When you add shapes to the flowchart and start changing their sizes and positions, they will inevitably become unaligned, which is very obvious when connectors are no longer straight lines.

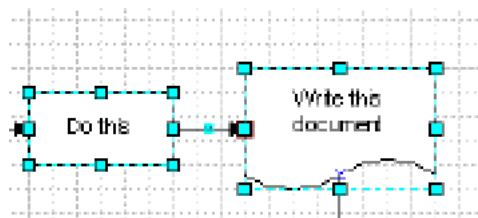
Instead of trying to keep shapes aligned by dragging them, you can do this more precisely using the aligning tools from the *Tools* menu. (Or use *F8*).



- 1 Select the shape to be aligned
- 2 Select the type of alignment
- 3 Click OK.

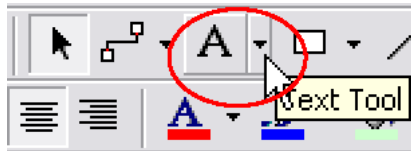


The shapes are aligned to the dominant shape (the one with the blue handles, which was selected first.)



The Tools Menu also has a tool to distribute shapes, so that they all have the same distance from each other. This is done about the same way as aligning shapes.

Adding text and a logo to the page

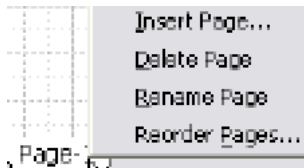


To add a title to the top of the page

- 1 Click the *Text Tool* on the toolbar.
- 2 Using the text-cursor, draw a text box at the top of the page where you want the title.
- 3 Type the title and format it with the usual formatting tools.

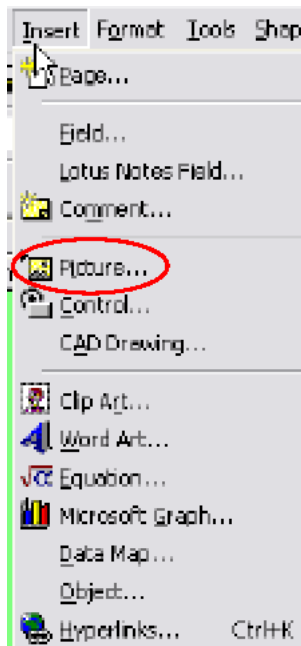
Use text boxes wherever you need text on the page.

There are also a couple of good shapes in the flowchart library for comments. Try these as well.



To create a background page for this and other flowcharts.

- 1 At the bottom of the drawing pane, right click on the *Page 1 tab*.
- 2 Rename the page to the name of this process.
- 3 Right-click again and select *Insert new page*.



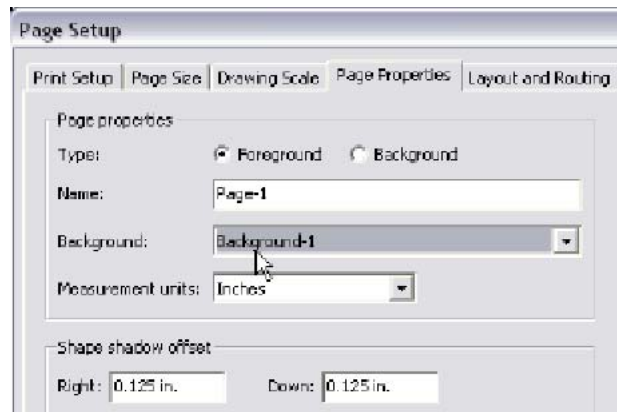
- 4 Select *Background*, type a name and click OK.
- 5 On the *Insert* menu, select *Picture*, and browse to the logo or other picture. Click OK.
- 6 Position and resize the logo as needed.
- 7 Add any background text in a text box.

You can use this background for all the flowcharts you create.



To link a background to a page

- 1 In the File menu, select Page Setup.



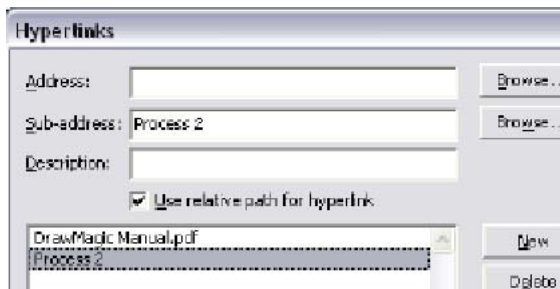
- 2 On the Page Properties tab, click the little arrow to the right of the Background box, and select the Background page you want to use.
- 3 Do this each time you create a new page in the flowchart.

To save as a template.

Save the document first as a template if you will be using the same set-up often.

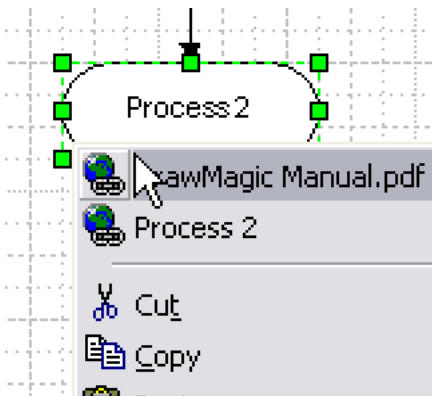
Creating links to other pages and documents

If your flow chart gets too big, you can extend it on several pages. For example, you can link from a terminator box that represents another procedure to that procedure, or from a document shape to the actual document file.



- 1 Create the page or document you want to link to.
- 2 Select the shape you want to link from.
- 3 In the *Insert* menu, select *Hyperlink* (or use the shortcut *Ctrl+K*.)

You can have several links from the same shape.

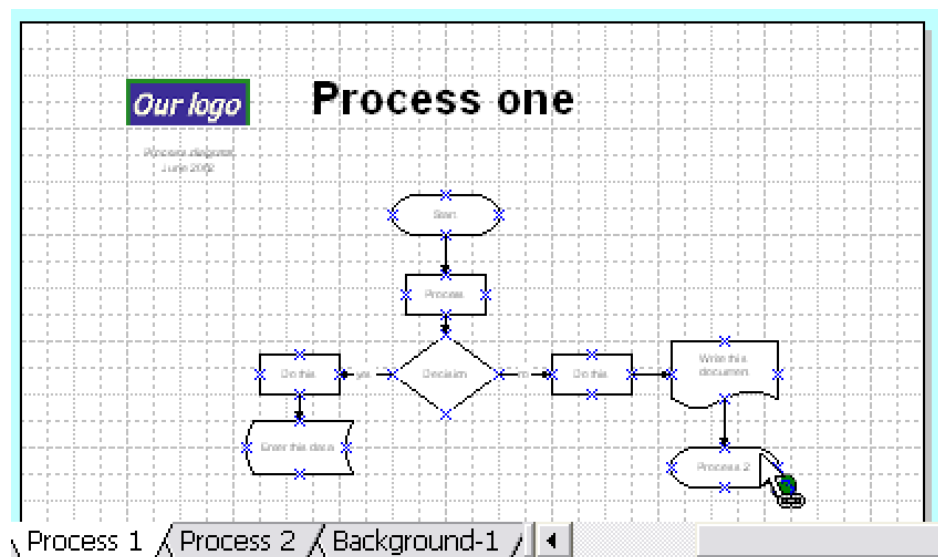


- 1 Click *New* to add each new link.
- 2 To link to another page in the same flowchart document, browse in the *Sub-address* box, and select the page.
- 3 To link to an external document, browse in the *Address* box.
- 4 Click *OK* when you have added all the hyperlinks you need.

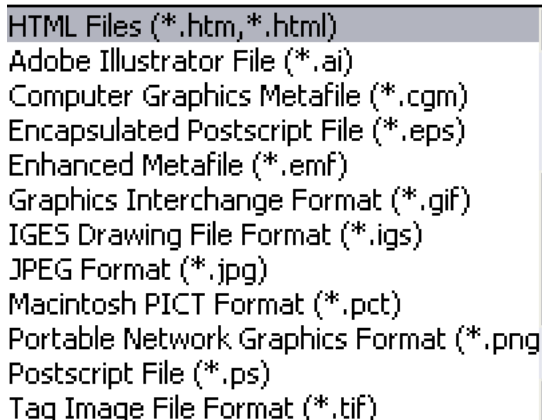
Access the links by *right-clicking* the shape to select a link.

If you create an html document from the flowchart, you will be able to click on the shape to access the link.

Here is the flowchart created during this tutorial.



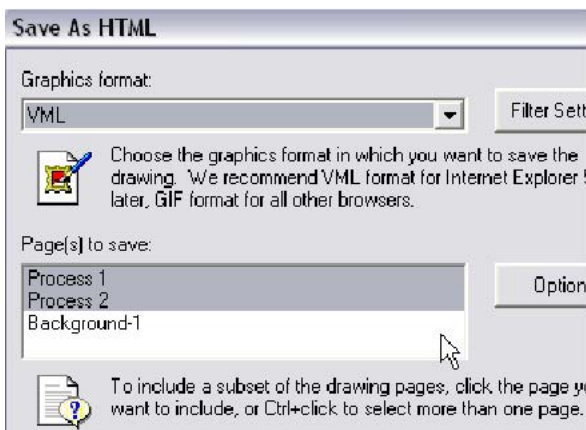
Saving the document in other formats



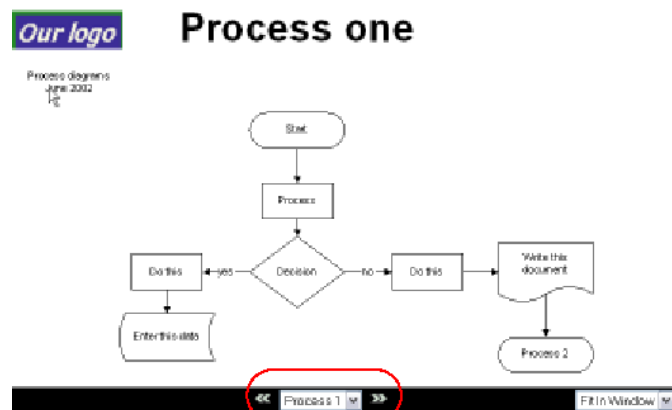
You can save the flowchart as a graphic to be used in another document, or even as a html webpage. The Save As option on the File menu provides for many different formats.

To use the picture in a webpage, save it as either .gif or .png. Use .tif for print documents. If you have included photos in the flowchart, a .jpg file may be smaller.

If you want to use the flowchart as a webpage, for example in an Intranet,:



- 1 Click HTML Files
- 2 The box suggests using VML as the graphics format if all the users have Internet Explorer 5.) (as in an Intranet). Use .png instead of .gif otherwise.
- 3 Select the pages to be saved. Do not select the background page. It comes automatically.
- 4 The completed webpage has a navigator box at the bottom. External links are accessed by clicking a box.



Visio products and prices

On the next page is information about the 2 Visio products available, Standard and Professional. You can find a lot of information and demos, as well as order a 30-day trial version from the Microsoft website at:

<http://www.microsoft.com/office/visio/>

Features	Visio Standard	Visio Professional
Intelligent SmartShapes® symbols	✓	✓
Drag-and-drop diagramming	✓	✓
Microsoft Office look and feel	✓	✓
Custom properties for shapes	✓	✓
Property reporting	✓	✓
Microsoft Visual Basic® for Applications 6.3	✓	✓
Block diagrams	✓	✓
Flowcharts	✓	✓
Organization charts	✓	✓
Timelines and calendars	✓	✓
Sales and marketing visuals	✓	✓
Directional maps	✓	✓
Basic office layouts	✓	✓
Web site maps		✓
Software/database diagramming and reverse engineering		✓
Engineering drawings		✓
Building, space, and floor plans		✓
Logical network diagrams		✓
Directory services diagrams		✓

Microsoft Office Product	New User Price ¹	Upgrade Price ¹
Visio Standard 2002	\$199 US	\$99.95 US
Visio Professional 2002	\$499 US	\$249 US