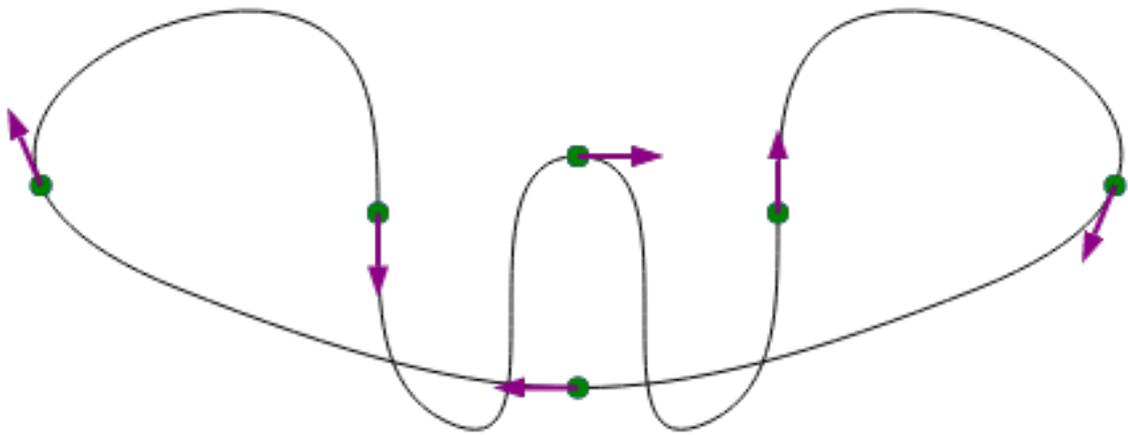


# SVG

*How to make your own*



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# Introduction to SVG

SVG stands for Scalable Vector Graphics. It is an XML language and file format, which allows you to code two-dimensional graphics that scale and can be manipulated via CSS or JavaScript.

SVG's are the must haves in order to achieve successful RWD. "SVG has been around about 15 years. The first public draft of SVG was introduced in 1999 and it didn't become a working draft until a few months later. A year and a half after first introducing SVG, the W3C issued SVG as a candidate recommendation in August 2000."

It has since come in hops, leaps and bounds. Due to the increase of browser support for SVG's and the trend of RWD, they have found huge success amongst web developers. It is an XML language and file format, which allows you to code two-dimensional graphics that scale and can be manipulated via CSS or JavaScript.

The xml code is used to plot points along the x and y axis which is then made visible with paths that run along the plotted points. The vector graphics produced by the codes are able to resize without losing any quality as vector based, paths, shapes and fills. This allows the SVG to have near infinite resolution, which makes it very popular for web developers who are able to place it into their web designs without the fear or risk of losing quality.

As you can see in the graph below, they're growing in popularity.



## Drawbacks

As great of an asset as it is, there are drawbacks to using an SVG. As mentioned earlier, the browser support is increasing a lot for SVG's. However, they are still not fully supported across as many browsers as png's and jpeg's.

IE	Edge *	Firefox	Chrome	Safari	Opera	iOS Safari *
6-8		2		3.1		
<sup>2</sup> 9-10	<sup>2</sup> 12-17	3-64	4-71	3.2-11.1	10-56	3.2-11.4
<sup>2</sup> 11	<sup>2</sup> 18	65	72	12	57	12.1
		66-67	73-75	12.1-TP		12.2

Another issue of using an SVG is that some could contain a large amount of intricacy in the SVG file, this could take a very long while to load or cause the browser to crash.

## Creating your own

There are two ways in which SVG's are often created. Drawing tools/software & coding. There are a variety of big name softwares that are of great use to creating SVG's. Illustrator and Sketch are both great programmes I've had the pleasure of using. Another software that has received a lot of credit is Inkscape. A free to use software that has gained a variety of positive reviews, "Top quality graphic design software without the high-end price tag". These are the main vector drawing tools that are used to create your own SVG. Creating SVG's on a software like illustrator and sketch is fairly simple, you just have to use the vector tool and essentially, start drawing. After finishing, it is important to export it as an SVG file type.

You can also use a variety of online tools to convert png's to SVG's.

<https://vectormagic.com> is a site you are able to retrace the image and turn it into a set of coordinates and lines. Once the paths and shape have been set, it's quite easy to use code editors to manipulate and edit the SVG's to your liking or need. This is due to the fact that the paths and fills in an SVG are targetable by CSS. By being able to select the paths and fills of an SVG, we are able to easily apply CSS animations to SVG's.

The final method of coding an SVG from scratch is a rather tiresome and a long process, as it is simply the act of setting x and y coordinates. This method is a lot better suited attempting online on a code playground like [codepen.io](https://codepen.io) where you are able to see the results in real time as opposed to using a code editor.

## Conclusion

In conclusion, it is quite simple to make your own SVG's with a large variety of softwares and online tools available to you to do so. It is a very useful skill to have if you wish to create unique icons and illustrations. Creating your own SVG's will allow you to fulfil your ideas without the compromise of having to use an SVG made by someone else. It is an asset that eases your workload with near infinite resolution, low file size and editing capabilities.

## References

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