

So Very Good

SVG et Wordpress

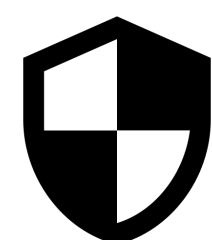
WP Toulouse
Nick Abadjian
5 février, 2019



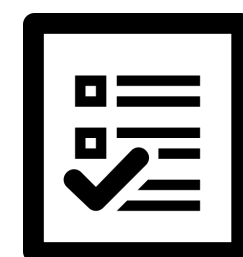
SVG et WordPress



Qu'est-ce que c'est



Failles de sécurité



Comment l'intégrer
dans WordPress

SVG definition



So Very Good

Super Vector Gains

Scalable Vector Graphics

SVG definition

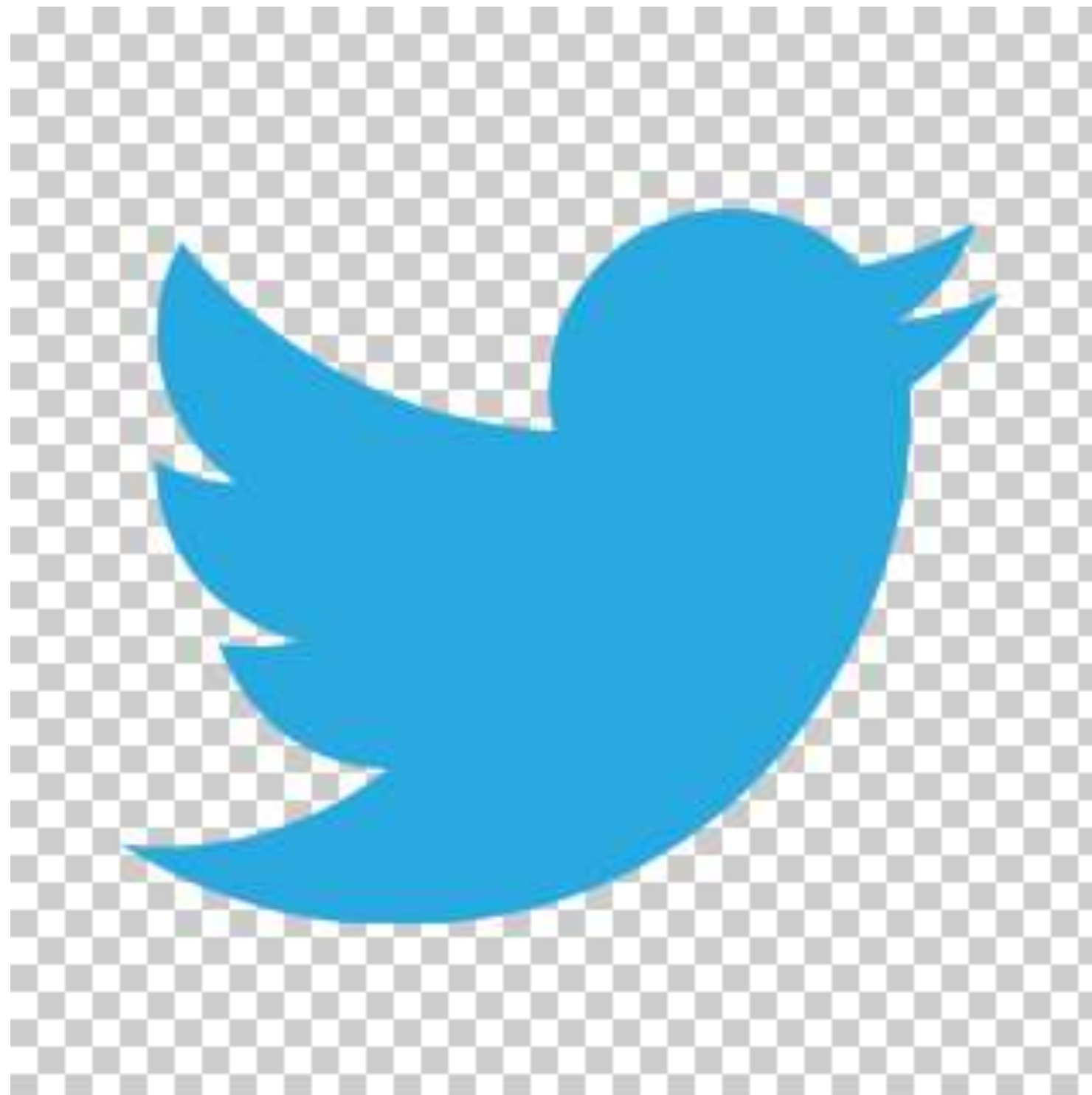
Scalable Vector Graphics



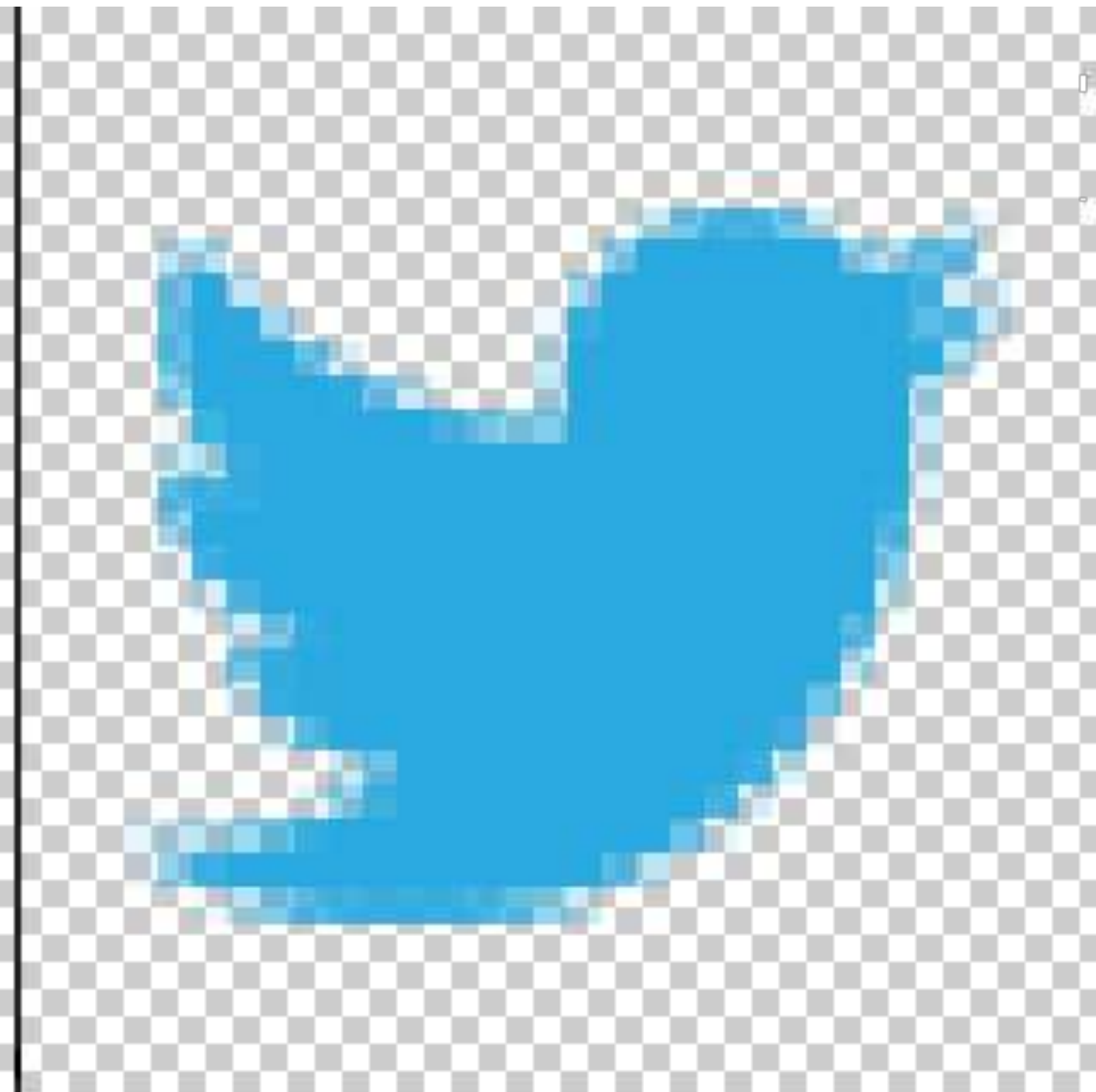
Math, points and code

- XML-based vector image
- for 2-D graphics
- supports interactivity and animation

You can manipulate it with code or a text editor



SVG
Image size: 1K - Increased in size, still smooth

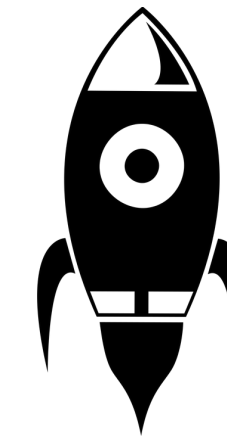
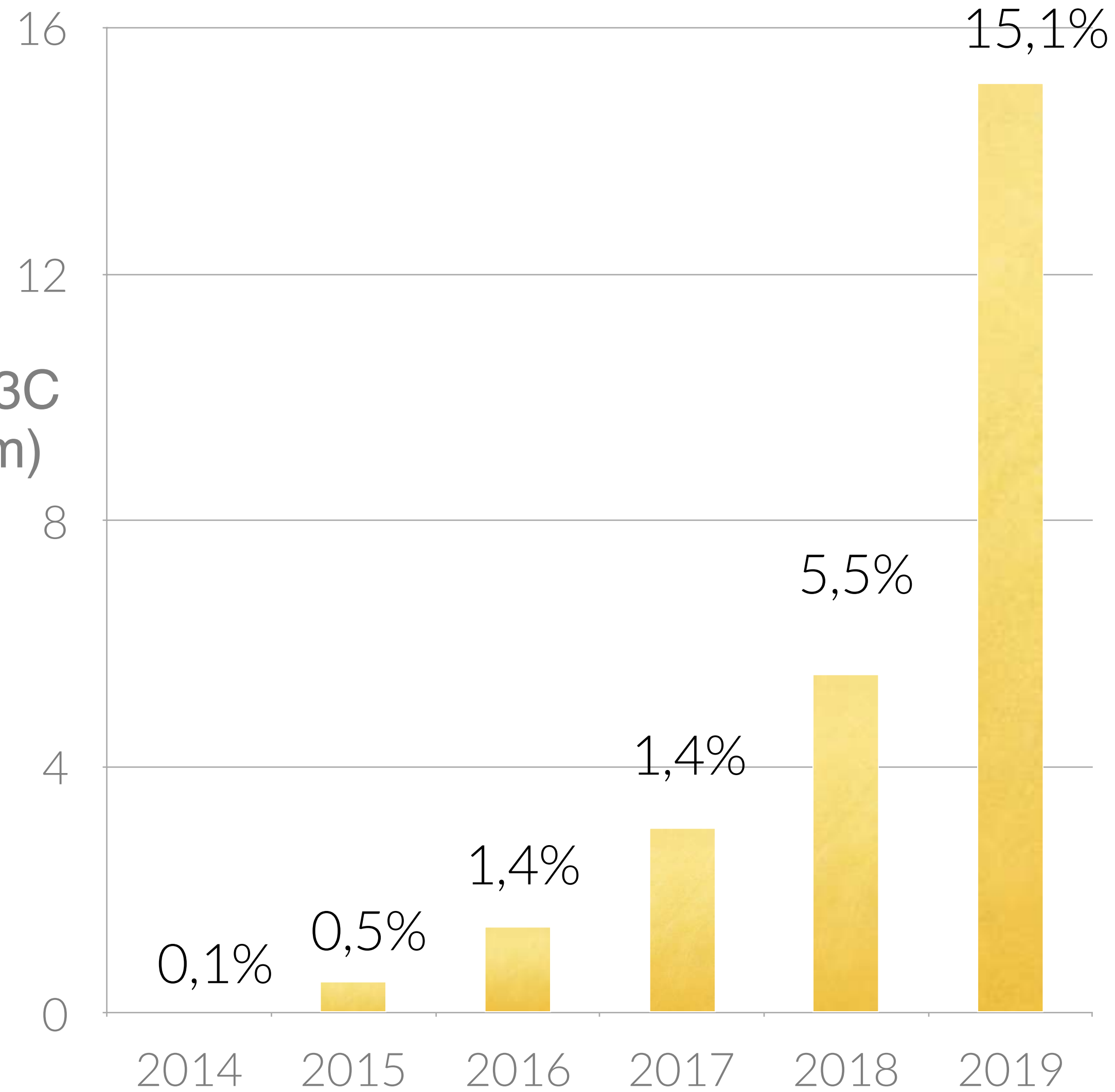


PNG-8
Image size: 1K - Increased in size, blocky

SVG

Developed in 1999 by the W3C
(World Wide Web Consortium)

Percentage of sites using SVG



1 janvier

<https://w3techs.com/technologies/details/im-svg/all/all>

SVG (basic support) - REC

Usage

% of all users

Global

94.96% + 0.4% = 95.35%

Method of displaying basic Vector Graphics features using the embed or object elements. Refers to the SVG 1.1 spec.

Current aligned

Usage relative

Date relative

Apply filters

Show all

?

IE	Edge *	Firefox	Chrome	Safari	Opera	iOS Safari *	Opera Mini *	Android Browser *	Blackberry Browser	Opera Mobile *	Chrome for Android	Firefox for Android	IE Mobile	UC Browser for Android	Samsung Internet	QQ Browser	Baidu Browser
								2.1-2.3									
6-8		2		3.1				¹ 3-4.3									
² 9-10	² 12-17	3-64	4-71	3.2-11.1	10-56	3.2-11.4		4.4-4.4.4	7	12-12.1			² 10		4-6.2		
² 11	² 18	65	72	12	57	12.1	all	67	10	46	71	64	² 11	11.8	7.2	1.2	7.12
		66-67	73-75	TP													

Notes

Known issues (4)

Resources (7)

Feedback

¹ Partial support in Android 3 & 4 refers to not supporting masking.

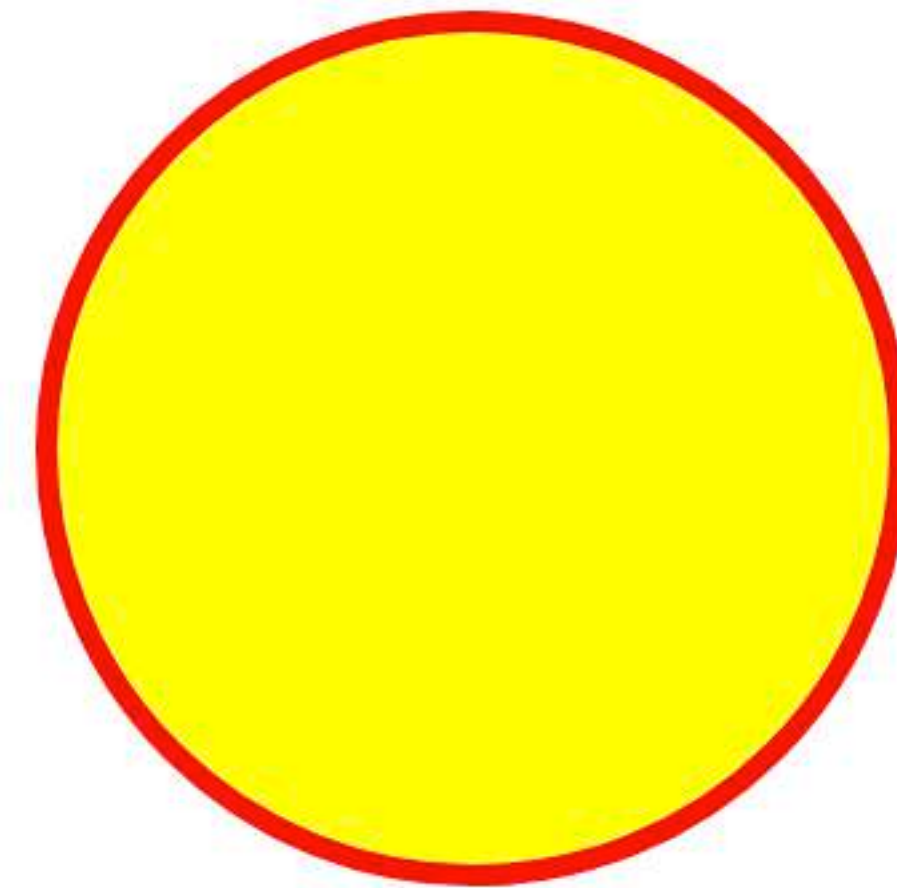
² IE9-11 desktop & mobile don't properly scale SVG files. Adding height, width, viewBox, and CSS rules seem to be the best workaround.

Simple cercle

```
<!DOCTYPE html>
<html>
<body>

<svg width="100" height="100">
  <circle cx="50" cy="50" r="40" stroke="red"
stroke-width="2" fill="yellow" />
</svg>

</body>
</html>
```



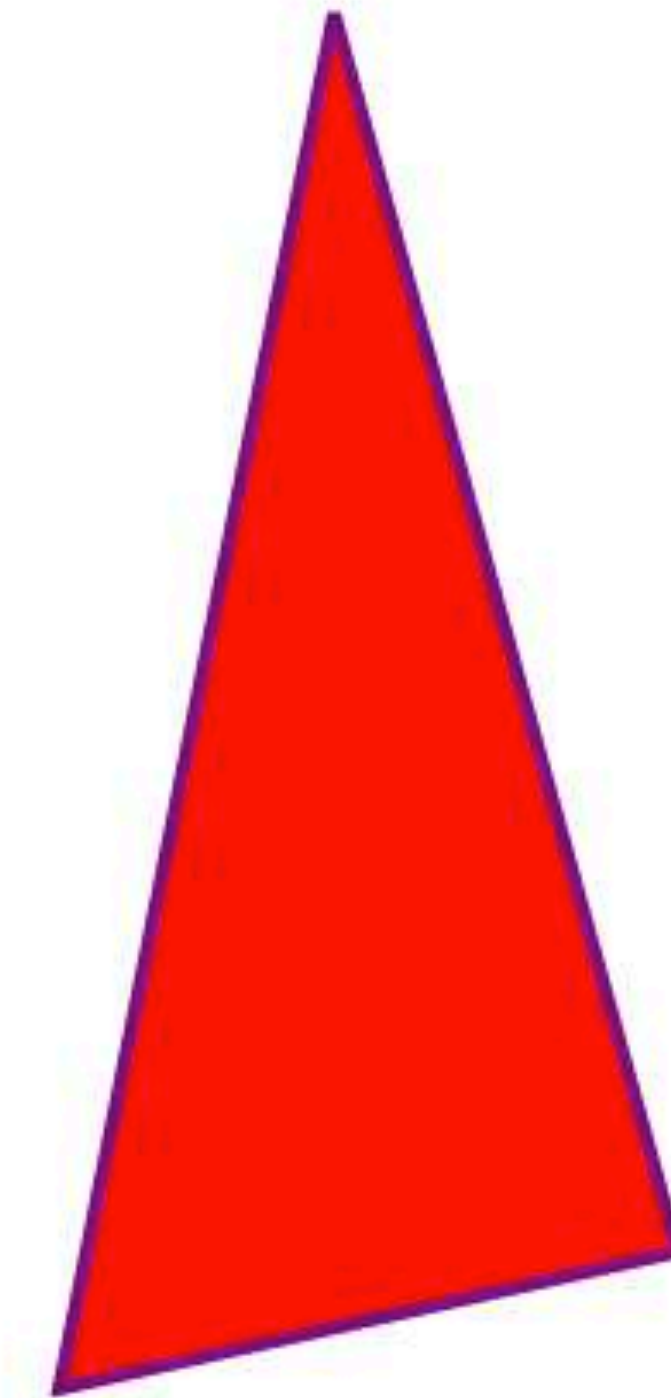
Simple rectangle

```
<!DOCTYPE html>
<html>
<body>
<svg width="400" height="110">
  <rect width="300" height="100" style="fill
:rgb(200,135,255);stroke-width:
3;stroke:green" />
</svg>
</body>
</html>
```



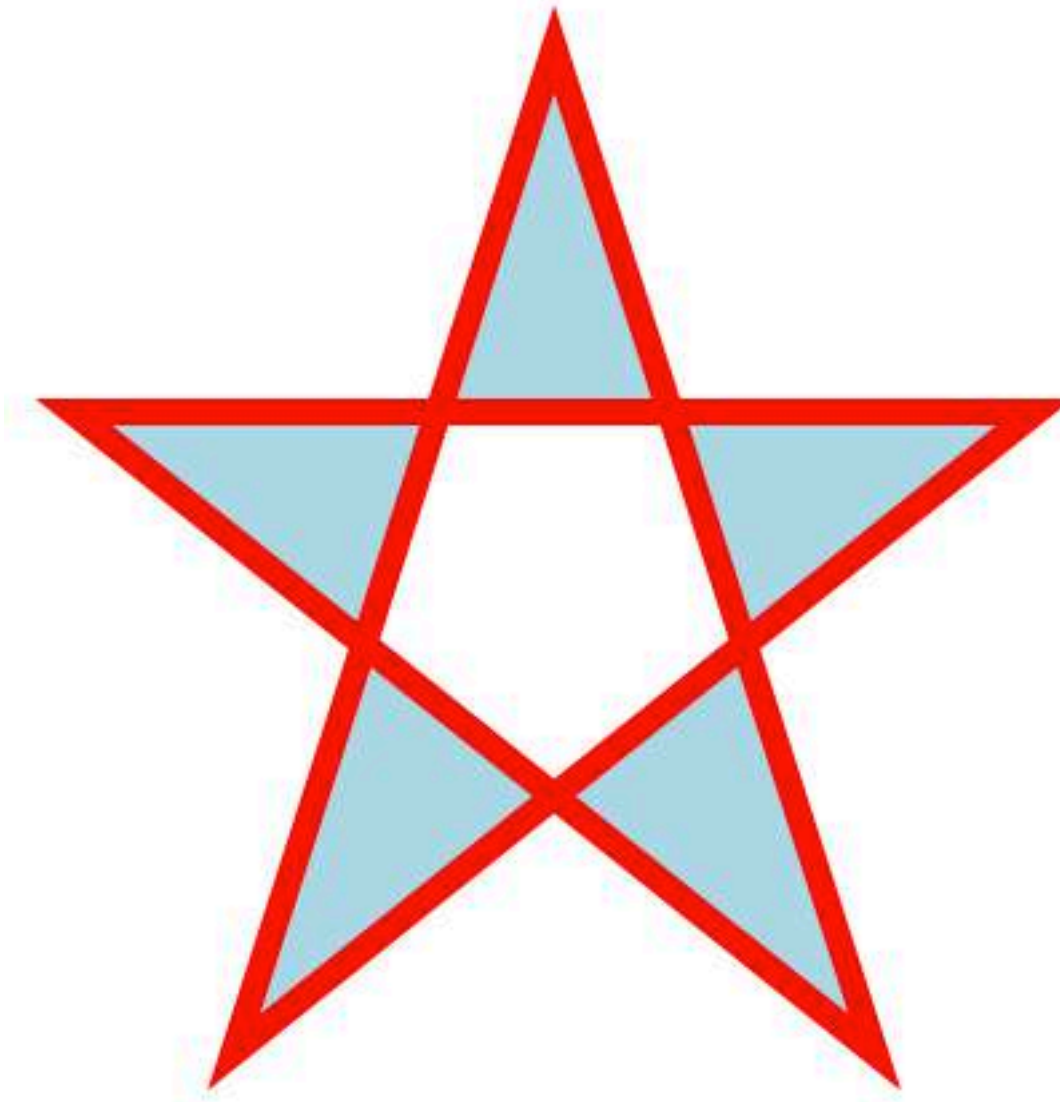
Simple polygon

```
<!DOCTYPE html>
<html>
<body>
<svg height="215" width="550">
  <polygon points="200,10 250,190
160,210" style="fill:red;stroke:purple;stroke-
width:2" />
</svg>
</body>
</html>
```



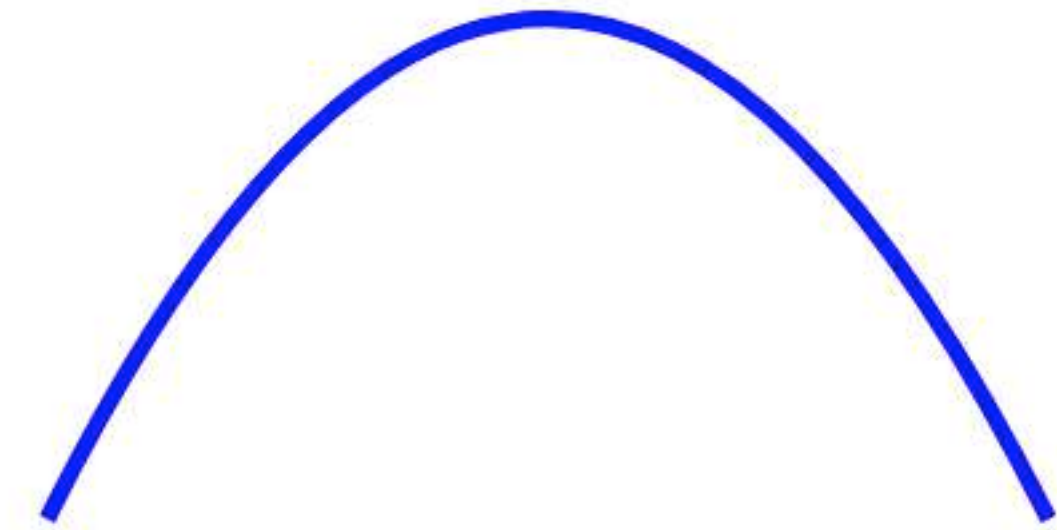
Polygon

```
<!DOCTYPE html>
<html>
<body>
<svg height="210" width="500">
  <polygon points="100,10 40,198 190,78 10,78
160,198"
  style="fill:lightblue;stroke:red;stroke-
width:5;fill-rule:evenodd;" />
</svg>
</body>
</html>
```

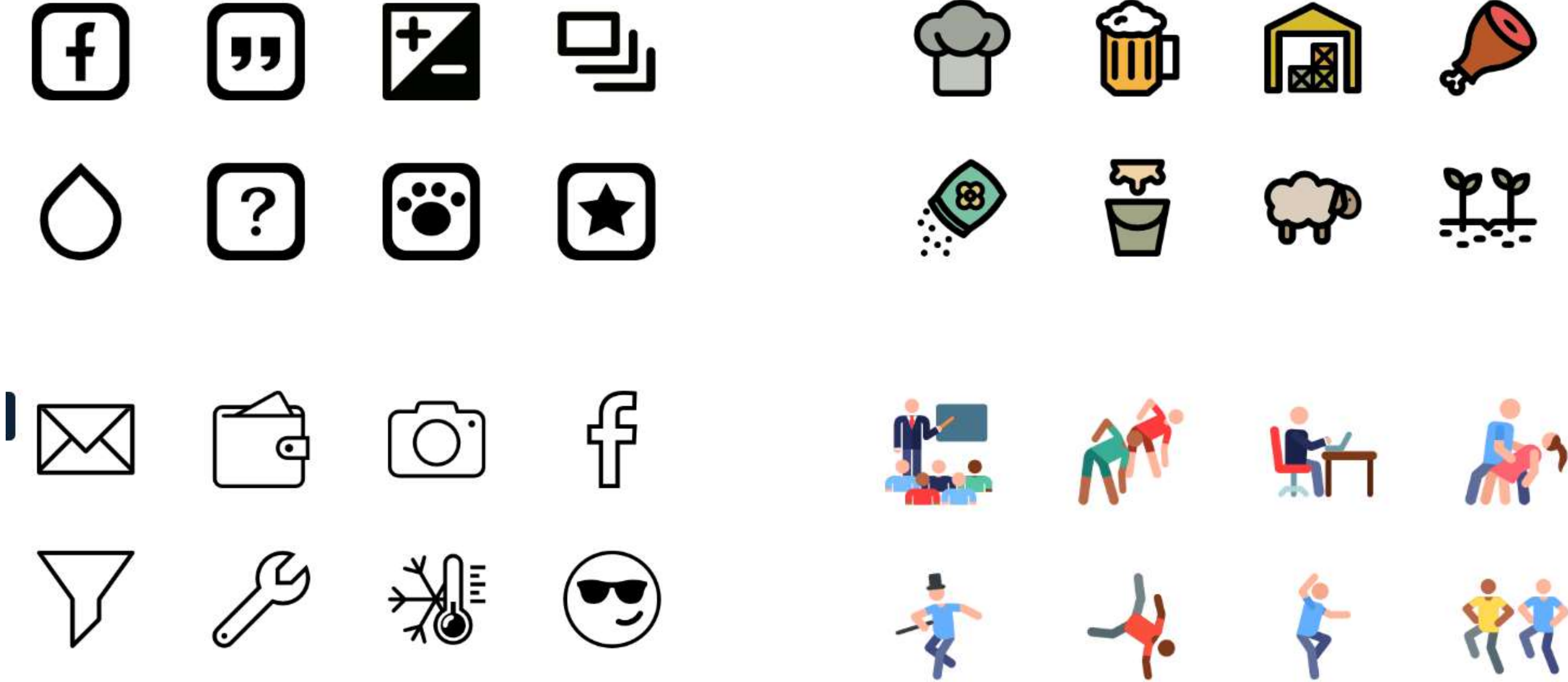


Path

```
<!DOCTYPE html>
<html>
<body>
<svg height="400" width="450">
  <path d="M 100 350 q 150 -300 300
0" stroke="blue"
  stroke-width="5" fill="none" />
</svg>
</body>
</html>
```



SVG Examples

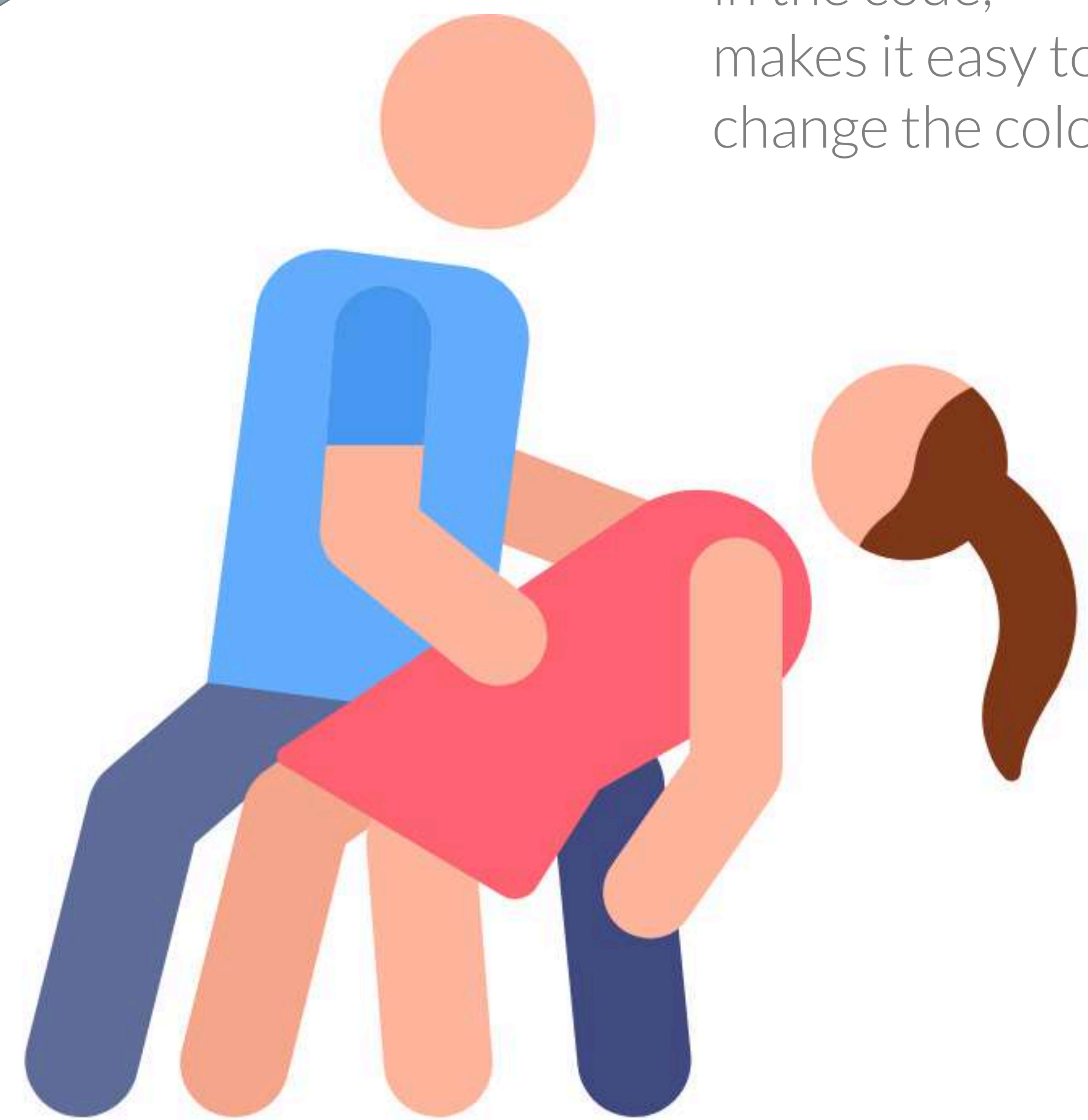


SVG Examples

path tags

finding the **head** in the code, makes it easy to change the color

```
<svg height="511pt" viewBox="-12 0 511 511.99331" width="511pt" xmlns="http://www.w3.org/2000/svg"><path d="m20.476562 511.199219c-14.132812-3.539063-22.722656-17.867188-19.183593-32.003907l28.816406-115.058593c1.316406-5.269531 4.230469-10 8.335937-13.550781l76.367188-66.027344c11.023438-9.527344 27.683594-8.316406 37.210938 2.703125 9.53125 11.023437 8.320312 27.683593-2.703126 37.214843l-70.054687 60.570313-26.789063 106.96875c-3.546874 14.171875-17.902343 22.710937-32 19.183594zm0 0" fill="#5f6e9b"/><path d="m330.507812 286.148438c-2.578124 0-5.199218-.464844-7.746093-1.449219l-146.339844-56.460938c-11.097656-4.285156-16.625-16.75-12.34375-27.847656 4.285156-11.101563 16.75-16.625 27.847656-12.34375l146.34375 56.464844c11.097657 4.28125 16.621094 16.75 12.339844 27.847656-3.300781 8.546875-11.101563 17.89063-20.101563 13.789063zm0 0" fill="#f7a78d"/><path d="m257.023438 488.160156-11.140626-114.722656-106.613281-67.800781c-12.296875-7.816407-15.925781-24.125-8.105469-36.417969 7.816407-15.925781 24.125-15.925781 36.417969-8.105469l117.472657 74.703125c6.851562 4.359375 11.316406 11.628906 12.101562 19.710938l117.472657 74.703125c1.40625 14.5-9.207031 27.398437-23.710938 28.808594-14.53125 1.414062-27.402343-9.230469-28.808593-23.707032zm0 0" fill="#414b82"/><path d="m211.582031 327.027344-126.667969-16.695313 22.644532-171.78125c2.4375-18.492187 19.402344-31.503906 37.894531-29.066406l59.707031 7.867187c18.492188 2.4375 31.503906 19.40625 29.066406 37.898438zm0 0" fill="#64afff"/><path d="m265.261719 49.992188c0 27.609374-22.382813 49.992187-49.992188 49.992187s-49.988281-22.382813-49.988281-49.992187c0-27.609376 22.378906-49.992188 49.988281-49.992188s49.992188 22.382812 49.992188 49.992188zm0 0" fill="#ffb69e"/><path d="m456.558594 208.140625c0 25.121094-20.367188 45.488281-45.488282 45.488281-25.121093 0-45.488281-20.367187-45.488281-45.488281s20.367188-45.484375 45.488281-45.484375c25.121094 0 45.488282 20.363281 45.488282 45.484375zm0 0" fill="#ffb69e"/><path d="m480.359375 241.992188c-5.976563-11.675782-14.140625-20.21875-24.1875-28.042969 1.902344-14.863281-3.542969-30.453125-16.144531-40.878907-13.972656 6.222657-24.480469 19.347657-26.625 35.625-.015625 113282-.027344.226563-.042969.339844-1.167969 9.398438-6.046875 17.851563-13.542969 23.636719-.046875.035156-.089844.066406-.136718.101563-5.15625 4.011718-9.191407 8.917968-12.097657 14.324218 5.207031 3.144532 11.128907 5.292969 17.542969 6.140625 8.625 1.136719 16.996094-.242187 24.398438-3.542969.007812.007813.011718.011719.019531.015626 2.917969-1.296876 5.894531-3.046876 8.675781-5.109376 2.703125 3.339844 6.054688 7.902344 8.863281 13.898438 3.910157 8.308594 5.980469 17.453125 5.636719 26.734375-.742188 20.890625-16.199219 35.257813-2.035156 63.453125 1.222656 2.085938 2.832031 4.269531 4.6875 6.1875 2.59375 2.679688 7.109375.902344 7.324218-2.820312.808594-14.042969 9.769532-27.839844 16.851563-39.734376 3.816406-6.972656 6.59375-14.742187 7.988281-22.75 2.84375-16.039062.285156-33.066406-7.175781-47.578124zm0 0" fill="#80391b"/><path d="m91.648438 511.230469c-13.542969-3.390625-21.769532-17.117188-18.378907-30.65625l28.816407-115.0625c1.261718-5.042969 4.050781-9.574219 7.984374-12.976563l79.914063-5.765625c10.558594-9.128906 26.519531-7.96875 35.648437 2.589844 9.128907 10.558594 7.96875 26.519531-2.589843 35.648437l-73.867188 52.535157-26.875 107.3125c-3.398437 13.582031-17.15625 21.757812-30.652343 18.375zm0 0" fill="#f7a78d"/><path d="m167.050781 488.707031-8.070312-102.234375c-.632813-8.015625 2.582031-15.851562 8.664062-21.109375l91.199219-78.851562c10.558594-9.128907 26.519531-7.96875 35.648438 2.589843 9.128906 10.558594 7.96875 26.519532-2.589844 35.648438l-81.527344 70.488281 7.066406 89.492188c1.097656 13.914062-9.292968 26.085937-23.207031 27.183593-13.882813 1.101563-26.082031-9.261718-27.183594-23.207031zm0 0" fill="#ffb69e"/><path d="m266.835938 360.105469-28.960938 45.292969c-3.394531 5.304687-10.386719 6.960937-15.796875 3.742187l-102.460937-60.933594c-2.746094-1.632812-2.859376-5.570312-.210938-7.355469l167.570312-113.132812c25.335938-14.304688 57.472657-5.363281 71.78125 19.972656 14.308594 25.335938 5.367188 57.472656-19.96875 71.78125zm0 0" fill="#ff6473"/><path d="m220.144531 311.660156c-5.039062 0-10.105469-1.671875-14.3125-5.105468l-60.15625-49.125c-5.714843-4.667969-8.796875-11.828126-8.261719-9.1875l6.625-91.042969c.910157-12.476563 11.757813-21.851563 24.234376-20.945313 12.476562.90625 21.855468 11.757813 20.945312 24.234375l-5.769531 79.300781 51.035156 41.675782c9.6875 7.914062 11.128906 22.183594 3.214844 31.871094-4.476563 5.484374-10.988281 8.324218-17.554688 8.324218zm0 0" fill="#ffb69e"/><path d="m185.609375 200.121094 3.613281-49.632813c.90625-12.476562-8.46875-23.328125-20.945312-24.234375-12.476563-.902344-23.328125 8.46875-24.234375 20.945313l-3.855469 52.921875zm0 0" fill="#4699f2"/><path d="m278.039062 425.238281c-9.769531-6.789062-12.183593-20.214843-5.390624-29.980469l36.328124-52.253906v-78.398437c0-11.894531 9.640626-21.539063 21.539063-21.539063 11.894531 0 21.535156 9.644532 21.535156 21.539063v85.152343c0 4.394532-1.34375 8.683594-3.851562 12.292969l-40.183594 57.796875c-6.777344 9.753906-20.195313 12.191406-29.976563 5.390625zm0 0" fill="#ffb69e"/></svg>
```



Icons made by Freepik

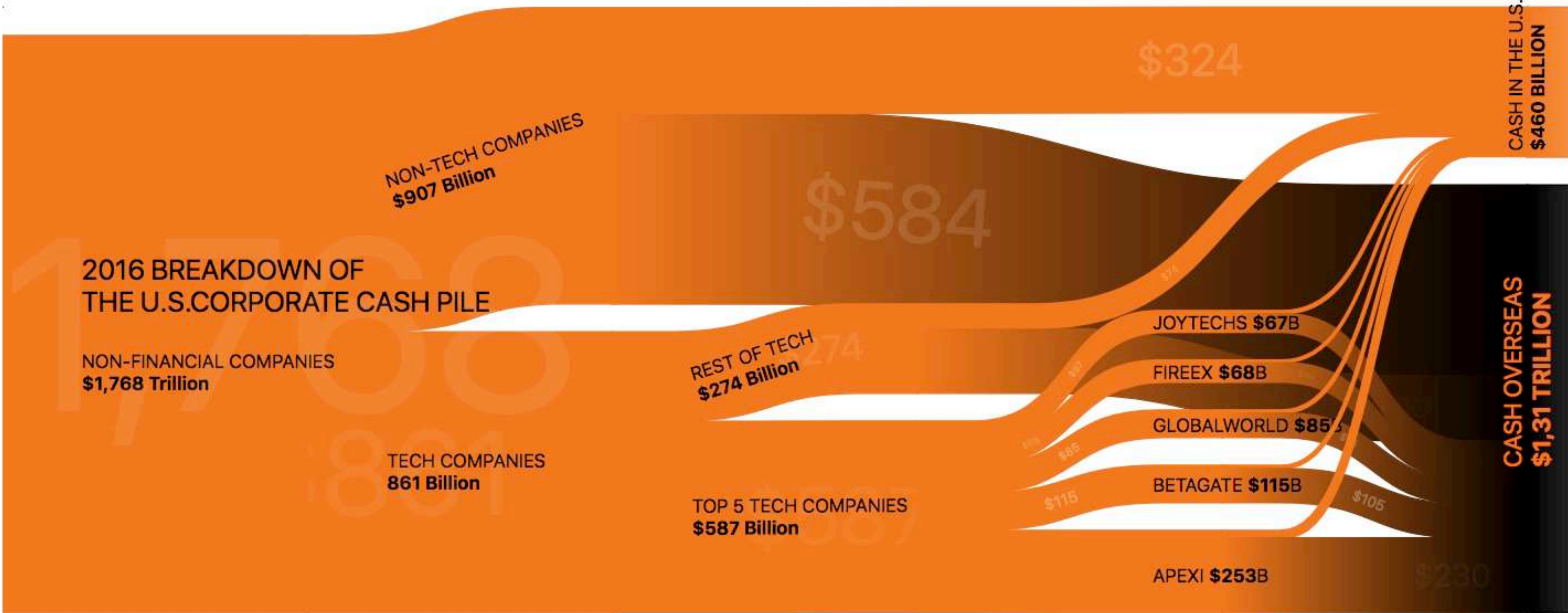
SVG Examples



SVG Examples

Data Visualization

animated demo - press play



<https://www.amcharts.com/demos/animated-sankey-diagram/>

SVG Examples

animated demo - press play



<http://snapsvg.io/demos/>

Size matters right?

jpg vs png vs svg



<http://genkihagata.com/blog/svg-vs-flat-images.html>

image Genki Hagata

png 85.1 KB



jpg 81.4 KB



svg 6.1 KB

93% moins que jpg

SVG as a gradient

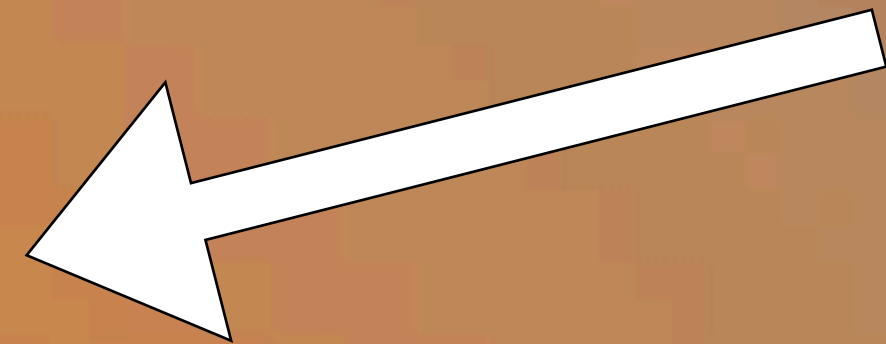
jpg 51,1 KB

png 47,6 KB

svg 912 KB

SVG as a gradient

jpg 51,1 KB



SVG as a gradient, inline

```
▼<svg onclick="clickFull(this);" xmlns="http://www.w3.org/2000/svg" viewBox="0 0 1280 534.6616" enable-background="new 0 0 1280 534.6616"> == $0
  ▼<g>
    ▼<linearGradient id="a" gradientUnits="userSpaceOnUse" x1="128.854" y1="695.024" x2="1152.501" y2="-163.918">
      <stop offset="0" stop-color="#F6532B"></stop>
      <stop offset=".044" stop-color="#F1592F"></stop>
      <stop offset=".105" stop-color="#E46C3A"></stop>
      <stop offset=".169" stop-color="#D1864B"></stop>
      <stop offset=".28" stop-color="#CA8651"></stop>
      <stop offset=".444" stop-color="#B68860"></stop>
      <stop offset=".638" stop-color="#968A7A"></stop>
      <stop offset=".782" stop-color="#7A8C91"></stop>
      <stop offset=".829" stop-color="#75878D"></stop>
      <stop offset=".882" stop-color="#687980"></stop>
      <stop offset=".939" stop-color="#51626C"></stop>
      <stop offset=".998" stop-color="#324250"></stop>
      <stop offset="1" stop-color="#31414F"></stop>
    </linearGradient>
    <path fill="url(#a)" stroke="#83775F" stroke-width="1.004" stroke-miterlimit="10" d="M-4.135-5.428H1285.49v541.963H-4.135z"></path>
  </g>
</svg>
```

More complicated images

Effects missing in the SVG file

The more intricate the image, the heavier the SVG file gets



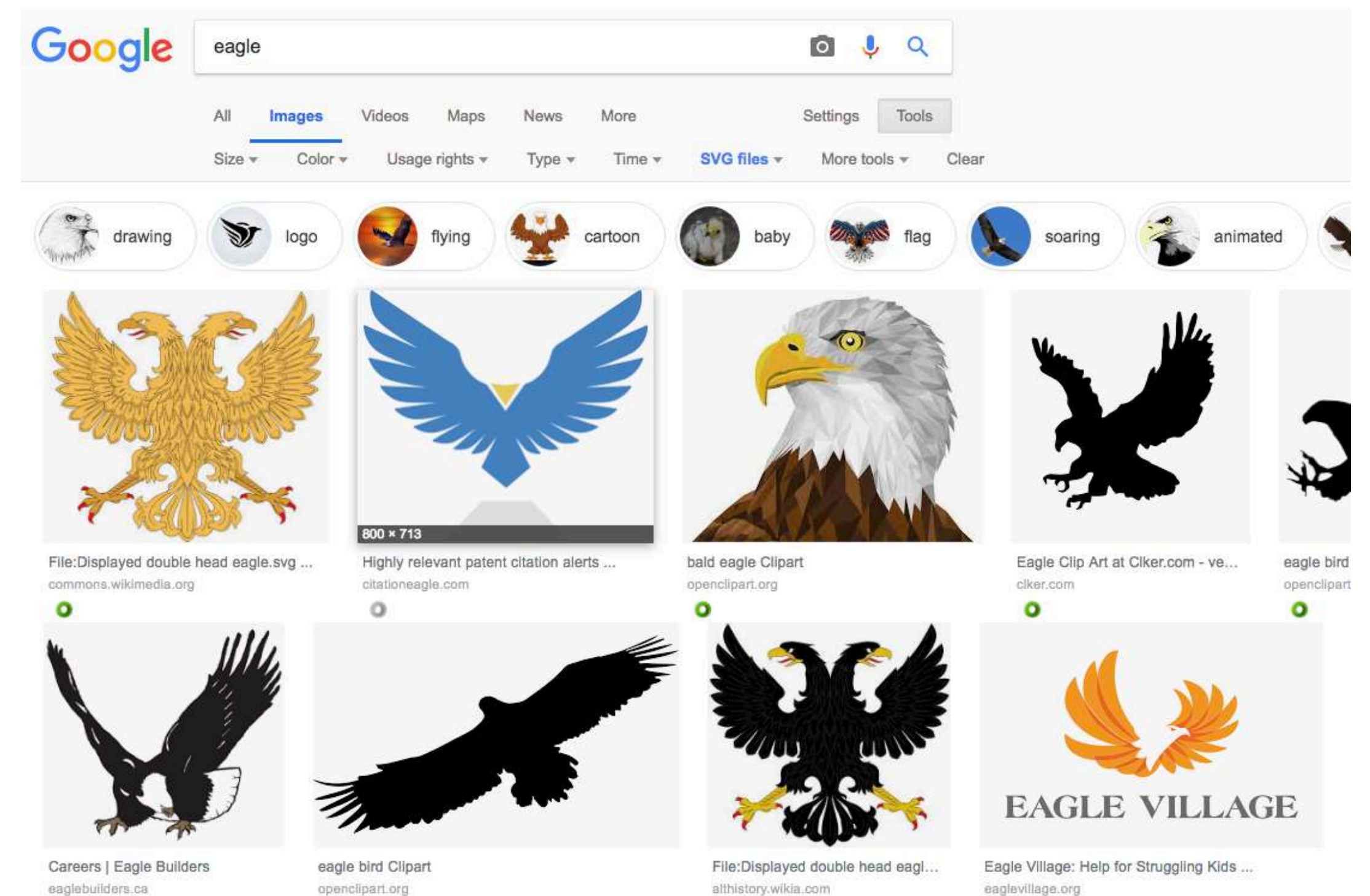
SVG

Images

- so it's good for **logos, icons**
- images that need greater detail such as feature image - stick with jpg or png

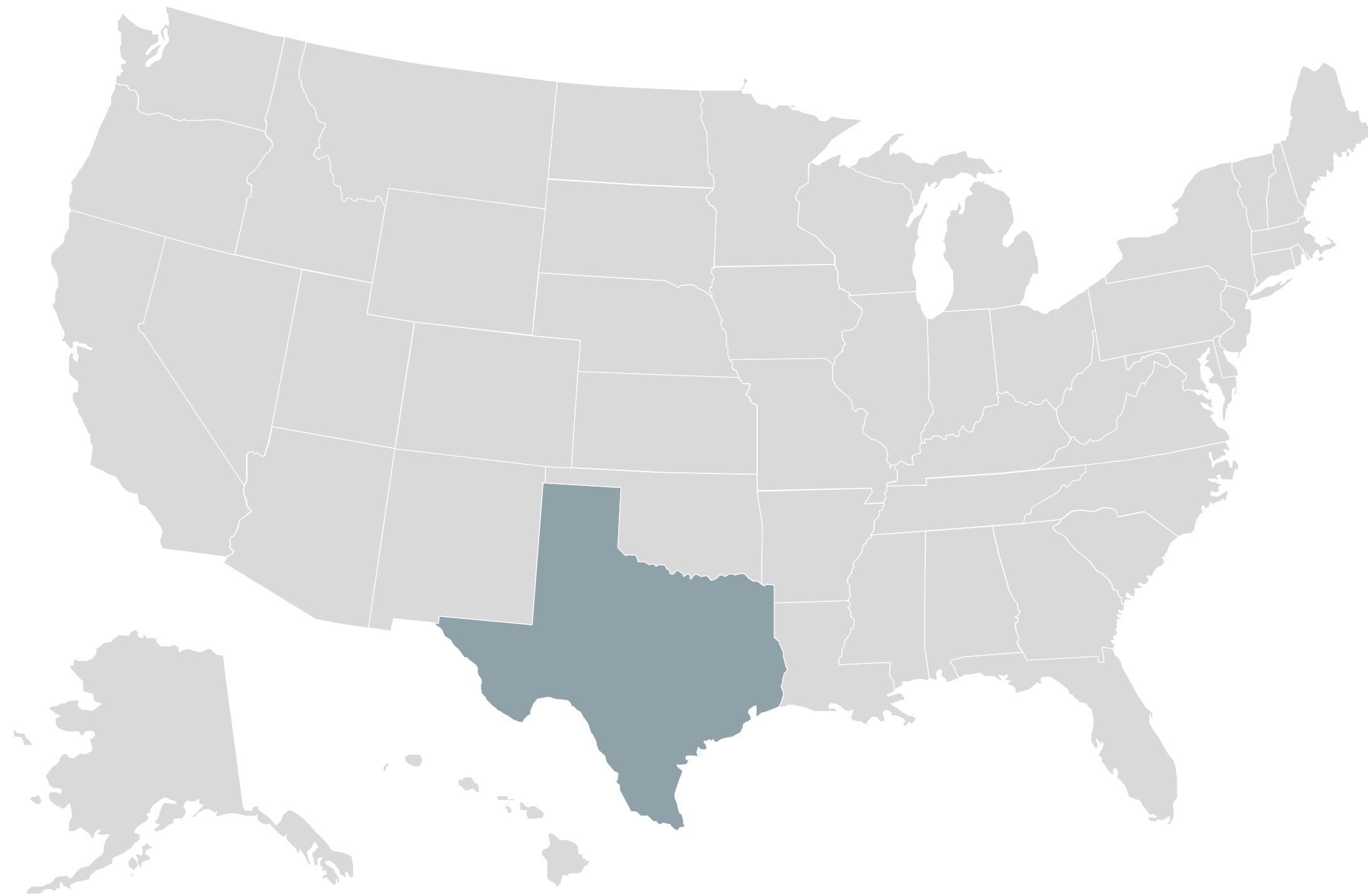
SEO

- SVG content linked to a file are **indexed**
- Inline SVGs, or files just composed of code, are typically not indexed



SVG Maps

The reason SVG piqued my interest



Easy to style with CSS

SVG security concerns

Upload New Media

Drop files here
or
Select Files

You are using the multi-file uploader. Problems? Try the [browser uploader](#) instead.

Maximum upload file size: 128 MB.

"image1.svg" has failed to upload.
Sorry, this file type is not permitted for security reasons. [Dismiss](#)

Wordpress does not allow you to upload SVG

SVG security concerns

Active discussions in the community regarding the core

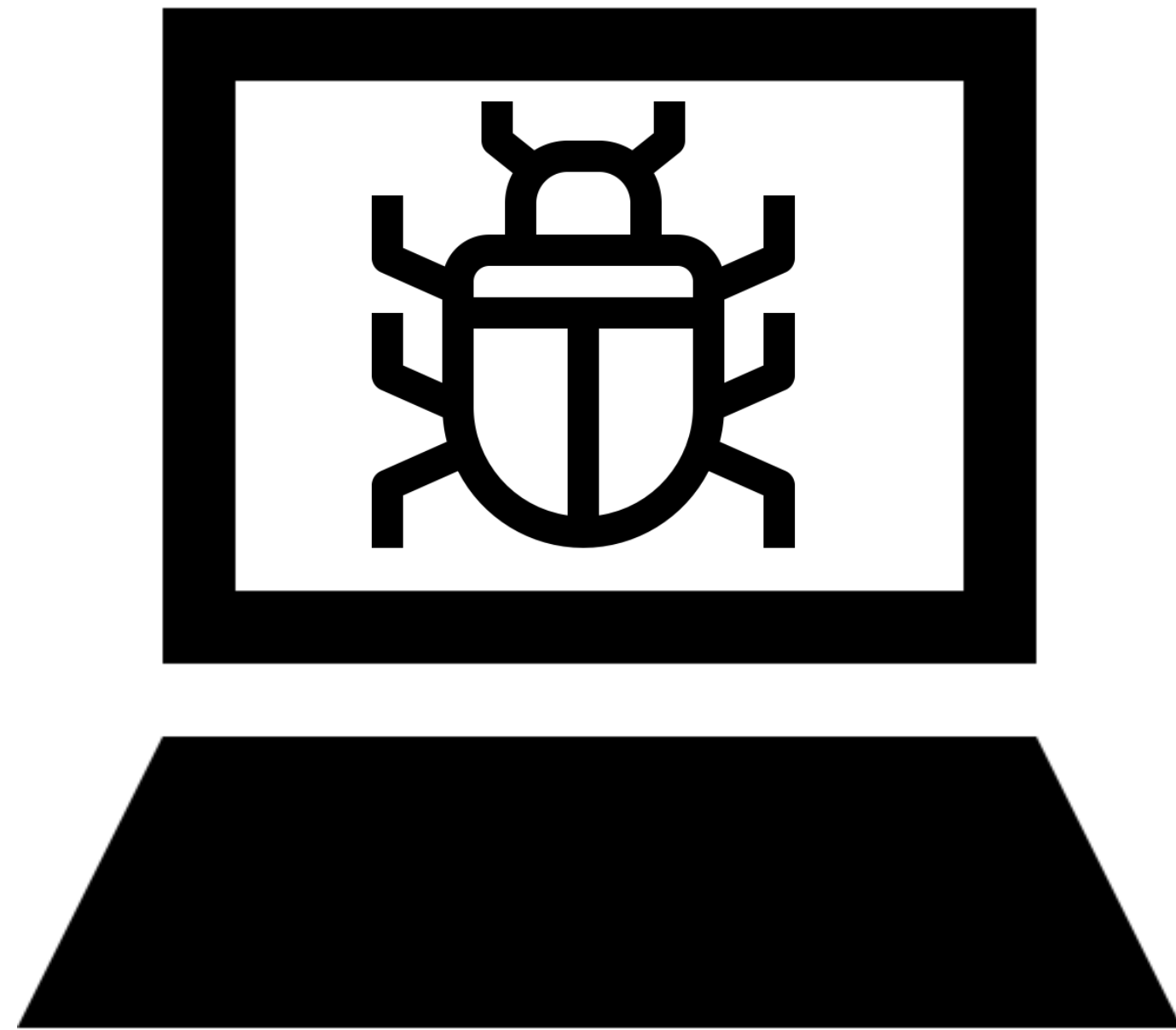


trop paranoïaque??

- Les vectorielles sont l'avenir et tout le monde le sait et le comprend
- Pourquoi ne pouvons-nous pas télécharger SVG?
- Nous pouvons déjà apporter des modifications au noyau, en téléchargeant des scripts personnalisés, des plugins et des thèmes
- Au moins laisser l'administrateur

<https://core.trac.wordpress.org/ticket/24251>

SVG security concerns

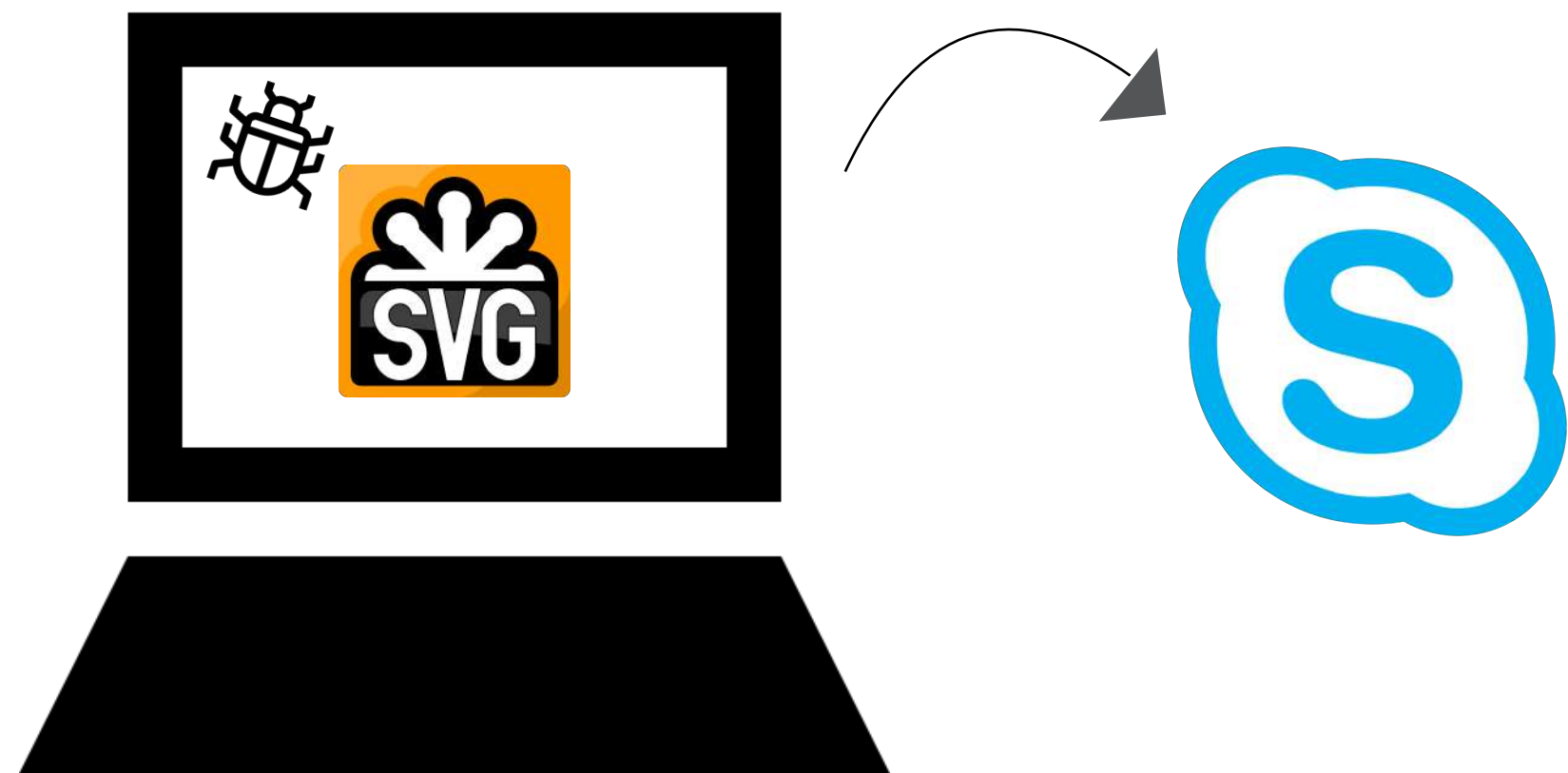


- xml external entity attacks (XXE)
 - bomb nested entities (XML bomb)
 - xss attacks
-
- ◆ pertures des données confidentiels
 - ◆ une attaque par déni de service
 - ◆ corruption de la mémoire

SVG security concerns

2011 The Image that called me

Active Content Injection with SVG files



Embedded javascript in a SVG file called Hiederic via Skype

Mario Heideric

Researcher at Ruhr-University and Microsoft

- ***SVG files should not be perceived as images***
- Allowing SVG for upload == allowing HTML for upload
- SVG can embed, link or reference any kind of content over cross domain borders
- SVG provides new ways of payload obfuscation

Using SVG in Wordpress

```
/* Autoriser les fichiers SVG */
```

Code snippet flying around

```
function cc_mime_type  
$mimes['svg'] = 'image/svg+xml';  
return $mimes;  
}  
add_filter('upload_mimes', 'cc_mime_type');
```

```
function cc_mime_type  
$mimes['svg'] = 'image/svg+xml';  
return $mimes;  
}  
add_filter('upload_mimes', 'cc_mime_type');
```

Be careful adding this code. Not recommended.

Using SVG in Wordpress

Daryll Doyle's SVG-Sanitizer

Demo of sanitizer
<http://svg.enshrined.co.uk/>

One solution: Sanitize SVG before uploading

- cleans code or input avoid issues like code injection, conflict or error
- includes encoding data, validating strings

SVG Sanitizer Test

This is here to allow you to test the SVG sanitizer. If you find anything that makes it through, please either open an issue on the [Github repo](#) or email it to me!

Have fun!

Dirty SVG

```
.st30{fill-rule:evenodd;clip-rule:evenodd;fill:#D5CDCD;}  
.st31{fill-rule:evenodd;clip-rule:evenodd;fill:#D5D4D5;}  
.st32{fill-rule:evenodd;clip-rule:evenodd;fill:#D5DAD8;}  
.st33{fill-rule:evenodd;clip-rule:evenodd;fill:#3B2717;}  
.st34{fill-rule:evenodd;clip-rule:evenodd;fill:#3B393E;}  
.st35{fill-rule:evenodd;clip-rule:evenodd;fill:#3B3A3E;}  
.st36{fill-rule:evenodd;clip-rule:evenodd;fill:#3B3A3F;}  
.st37{fill-rule:evenodd;clip-rule:evenodd;fill:#3B3E43;}  
.st38{fill-rule:evenodd;clip-rule:evenodd;fill:#3B3F4B;}  
.st39{fill-rule:evenodd;clip-rule:evenodd;fill:#3B4755;}  
.st40{fill-rule:evenodd;clip-rule:evenodd;fill:#D69876;}  
.st41{fill-rule:evenodd;clip-rule:evenodd;fill:#D69B80;}  
.st42{fill-rule:evenodd;clip-rule:evenodd;fill:#D69E7B;}
```

Sanitize

Cleaned SVG

```
<?xml version="1.0" encoding="UTF-8"?>  
<!-- Generator: Adobe Illustrator 16.0.0, SVG Export Plug-In . SVG Version: 6.00 Build 0) -->  
<svg xmlns="http://www.w3.org/2000/svg" xmlns:xlink="http://www.w3.org/1999/xlink" id="Layer_1" x="0px" y="0px" width="960px" height="560px" viewBox="0 0 960 560" style="enable-background:new 0 0 960 560;" xml:space="preserve">  
<style type="text/css">  
<![CDATA[  
    .st0{fill-rule:evenodd;clip-rule:evenodd;fill:#D4A083;}  
    .st1{fill-rule:evenodd;clip-rule:evenodd;fill:#D4A28E;}
```

SVG et Wordpress

Plugins



Safe SVG

Enable SVG uploads and sanitize them to stop XML/SVG vulnerabilities in your WordPress website

Par Daryll Doyle

50k installations

Dernière mis à jour: il y a 8 jours



SVG Support

Upload SVG files to the Media Library and render SVG files inline for direct styling/animation of an SVG's internal elements using CSS/JS.

By Benbodhi

200k installations

Dernière mis à jour: il y a 2 mois

Settings

Restrict to Administrators?

Yes

Restricts SVG upload privileges to Administrators.

Enable Advanced Mode?

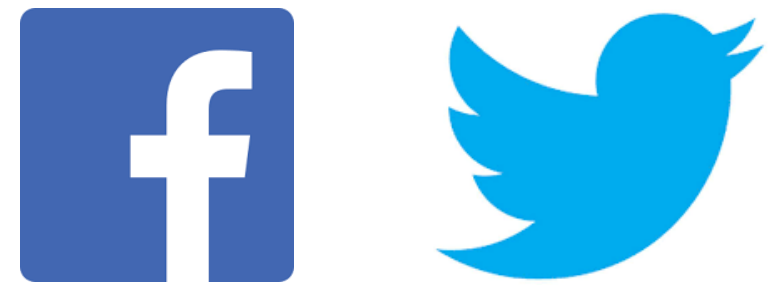
Yes

You don't need to enable this to simply use SVG files as images. Enabling this will trigger advanced options and SVG functionality such as inline rendering.



SVG et Wordpress

Social Media Sharing



Facebook and Twitter don't support SVG for sharing

In case you use an SVG for your featured image, you need to use Yoast, for example, to upload a png or jpg for the OG and meta tags



End

**Much of the sources
and information came
from:**

[https://kinsta.com/
blog/wordpress-svg/](https://kinsta.com/blog/wordpress-svg/)

Other sources

[https://www.kryzalid.net/blogue-
marketing-web/5-raisons-dutiliser-le-
svg](https://www.kryzalid.net/blogue-marketing-web/5-raisons-dutiliser-le-svg)

[http://svgtutorial.com/additional-tools-
and-resources/](http://svgtutorial.com/additional-tools-and-resources/)

[https://www.sarasoueidan.com/tags/
svg/](https://www.sarasoueidan.com/tags/svg/)

Guides

<https://svgontheweb.com/>

[https://developer.mozilla.org/en-US/
docs/Web/SVG/Tutorial/Introduction](https://developer.mozilla.org/en-US/docs/Web/SVG/Tutorial/Introduction)

<http://svgpocketguide.com/book/#intro>

Tools for vector graphics

Illustrator Sketch

SVGEdit Inkscape

Optimizing SVG

SVGO

Animating SVG

[https://medium.com/@aniboaz/animate-
svg-4fa7dd00e860](https://medium.com/@aniboaz/animate-svg-4fa7dd00e860)

Sara Drasner: Intricate SVG Animations

[https://www.youtube.com/watch?
v=wc8ovZZ78SY&t=445s](https://www.youtube.com/watch?v=wc8ovZZ78SY&t=445s)

Libraries and Javascript

SVGsnap

anime.js

<https://greensock.com/>

<http://mojs.io/>



<https://codepen.io/airnan/pen/JmOqbN>