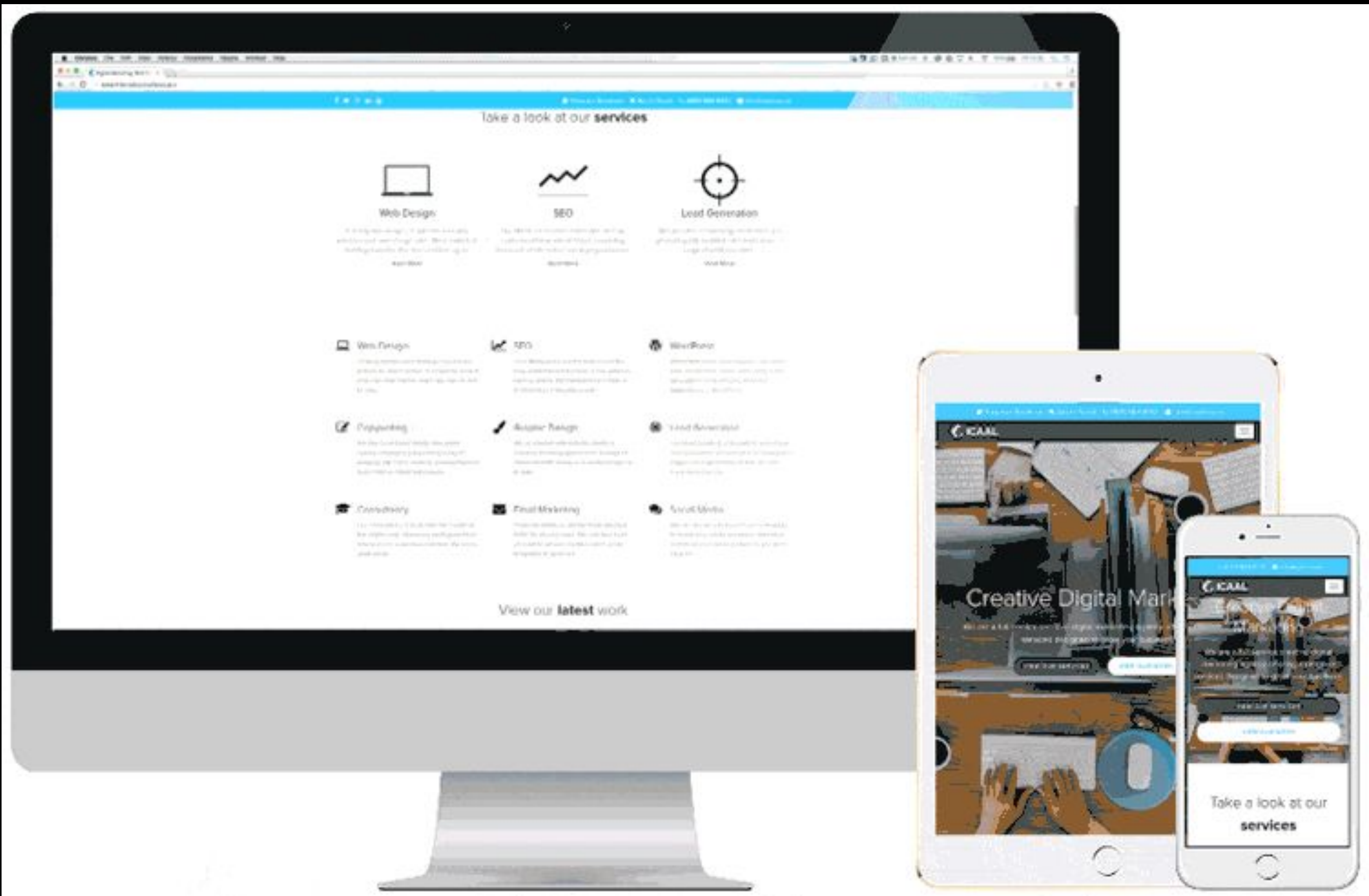# RESPONSIVE WEB DESIGN

RESPONSIVE WEB DESIGN

FLEXIBLE IMAGES

USE RELATIVE SIZING

```
img{

    width: 50%;

}
```

RESPONSIVE WEB DESIGN

FLEXIBLE IMAGES

SRCSET

THIS ATTRIBUTE FOR THE IMG ELEMENT ALLOWS US TO GUIDE THE BROWSER IN CHOOSING THE BEST IMAGE AND IMAGE SIZE FOR THE WEBSITE.

RETINA DISPLAYS

```
<img src="photo.png" srcset="photo@2x.png 2x"
alt="trees">
```

THE ABOVE CODE SUPPLIES A PHOTO.PNG AS THE NORMAL PHOTO FOR THE BROWSER TO USE AND AN ALTERNATIVE FOR RETINA/HIGH DENSITY DISPLAYS.

RESPONSIVE WEB DESIGN

FLEXIBLE IMAGES

SRCSET

THIS ATTRIBUTE FOR THE IMG ELEMENT ALLOWS US TO GUIDE THE BROWSER IN CHOOSING THE BEST IMAGE AND IMAGE SIZE FOR THE WEBSITE.

YOU CAN SPECIFY THE SIZE OF EACH SUPPLIED IMAGE BY ADDING A WIDTH DESCRIPTOR ALONG WITH THE SIZE OF THE IMAGE ELEMENT.

```
<img src="lighthouse-200.jpg" sizes="50vw"
    srcset= "lighthouse-100.jpg 100w,    lighthouse-200.jpg 200w,
            lighthouse-400.jpg 400w, lighthouse-800.jpg 800w,
            lighthouse-1000.jpg 1000w, lighthouse-1400.jpg 1400w,
            lighthouse-1800.jpg 1800w" alt="a lighthouse">
```

THE ABOVE EXAMPLE RENDERS AN IMAGE THAT IS HALF THE VIEWPORT WIDTH (SIZES="50VW") AT WHATEVER SIZE THE BROWSER THINKS IS BEST FOR THE DEVICE

RESPONSIVE WEB DESIGN

FLEXIBLE IMAGES

SRCSET

```
<img src="lighthouse-200.jpg" sizes="50vw"
    srcset= "lighthouse-100.jpg 100w,    lighthouse-200.jpg 200w,
            lighthouse-400.jpg 400w, lighthouse-800.jpg 800w,
            lighthouse-1000.jpg 1000w, lighthouse-1400.jpg 1400w,
            lighthouse-1800.jpg 1800w" alt="a lighthouse">
```

Browser width	Device pixel ratio	Image used	Effective resolution
400px	1	**200.png**	1x
400px	2	**400.png**	2x
320px	2	**400.png**	2.5x
600px	2	**800.png**	2.67x
640px	3	**1000.png**	3.125x
1100px	1	**1400.png**	1.27x

RESPONSIVE WEB DESIGN

FLEXIBLE IMAGES

SRCSET

```
<img src="400.png"
    sizes="(min-width: 600px) 25vw, (min-width: 500px) 50vw, 100vw"
    srcset="100.png 100w, 200.png 200w, 400.png 400w,
            800.png 800w, 1600.png 1600w, 2000.png 2000w" alt="an
example image">
```

MEDIA QUERIES IN THE SIZES ATTR SPECIFY THE SIZE OF THE IMAGE AT DIFFERENT SCREEN SIZES.

HERE, WHEN THE BROWSER WIDTH IS GREATER THAN 600PX, THE IMAGE IS 25% OF THE VIEWPORT WIDTH; WHEN IT IS BETWEEN 500PX AND 600PX, THE IMAGE IS 50% OF THE VIEWPORT WIDTH; AND BELOW 500PX, IT IS FULL WIDTH.

RESPONSIVE WEB DESIGN

ZOOM

```
<meta name="viewport" content="width=device-width,
initial-scale=1.0">
```

PAGES OPTIMIZED FOR A VARIETY OF DEVICES MUST INCLUDE A META VIEWPORT TAG IN THE HEAD OF THE DOCUMENT. A META VIEWPORT TAG GIVES THE BROWSER INSTRUCTIONS ON HOW TO CONTROL THE PAGE'S DIMENSIONS AND SCALING.

`width=device-width` match the screen's width in device-independent pixels. `initial-scale=1` establishes a 1:1 relationship between CSS pixels and device-independent pixels.

RESPONSIVE WEB DESIGN

ZOOM