

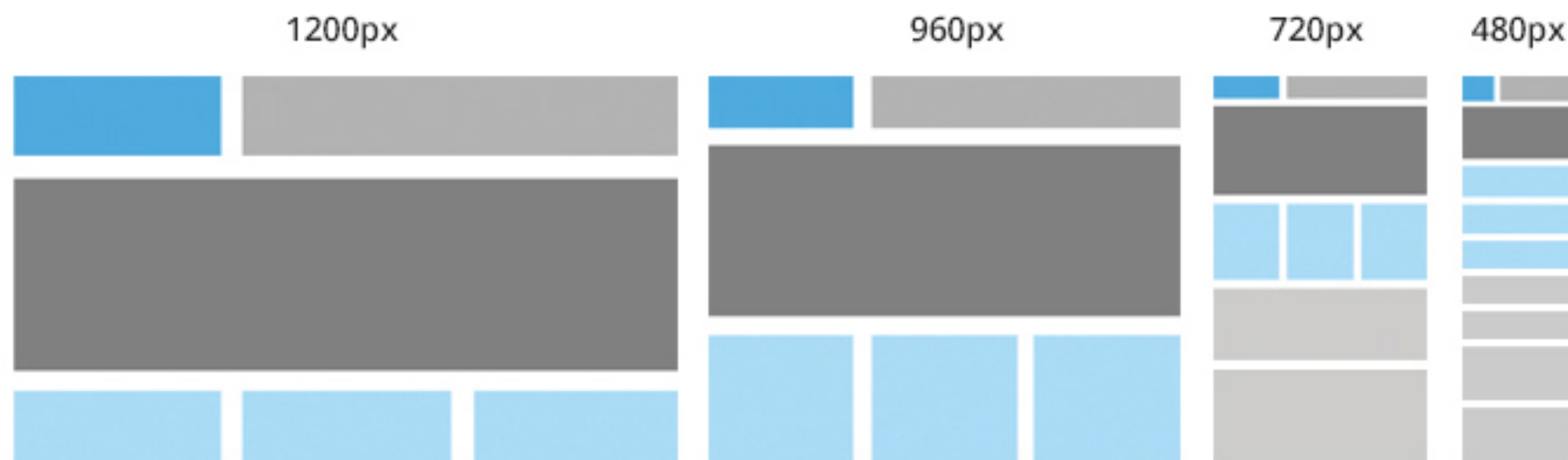
# Responsive Web Design

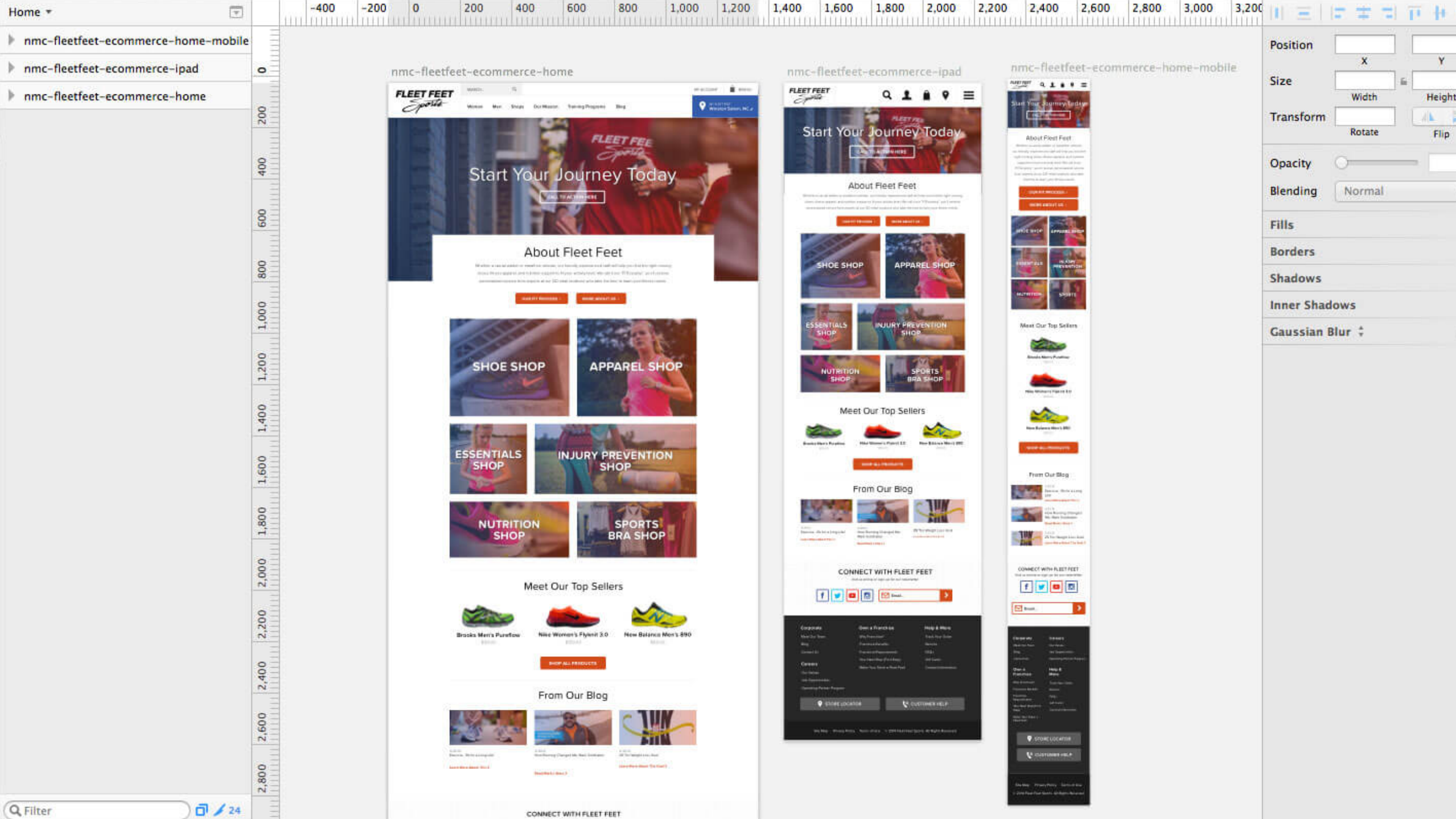
반응형 웹

# Responsive Web Design

Mobilizing Your Website with RWD Project Key Point Guide, HTML5, CSS3

데스크탑에서 모바일 기기까지 각각 다른 다양한 해상도의 디바이스에 맞춰 웹사이트의 레이아웃이 동적으로 변환되면서 텍스트, 이미지 및 UI가 최적화되어 보여지도록 하는 기법



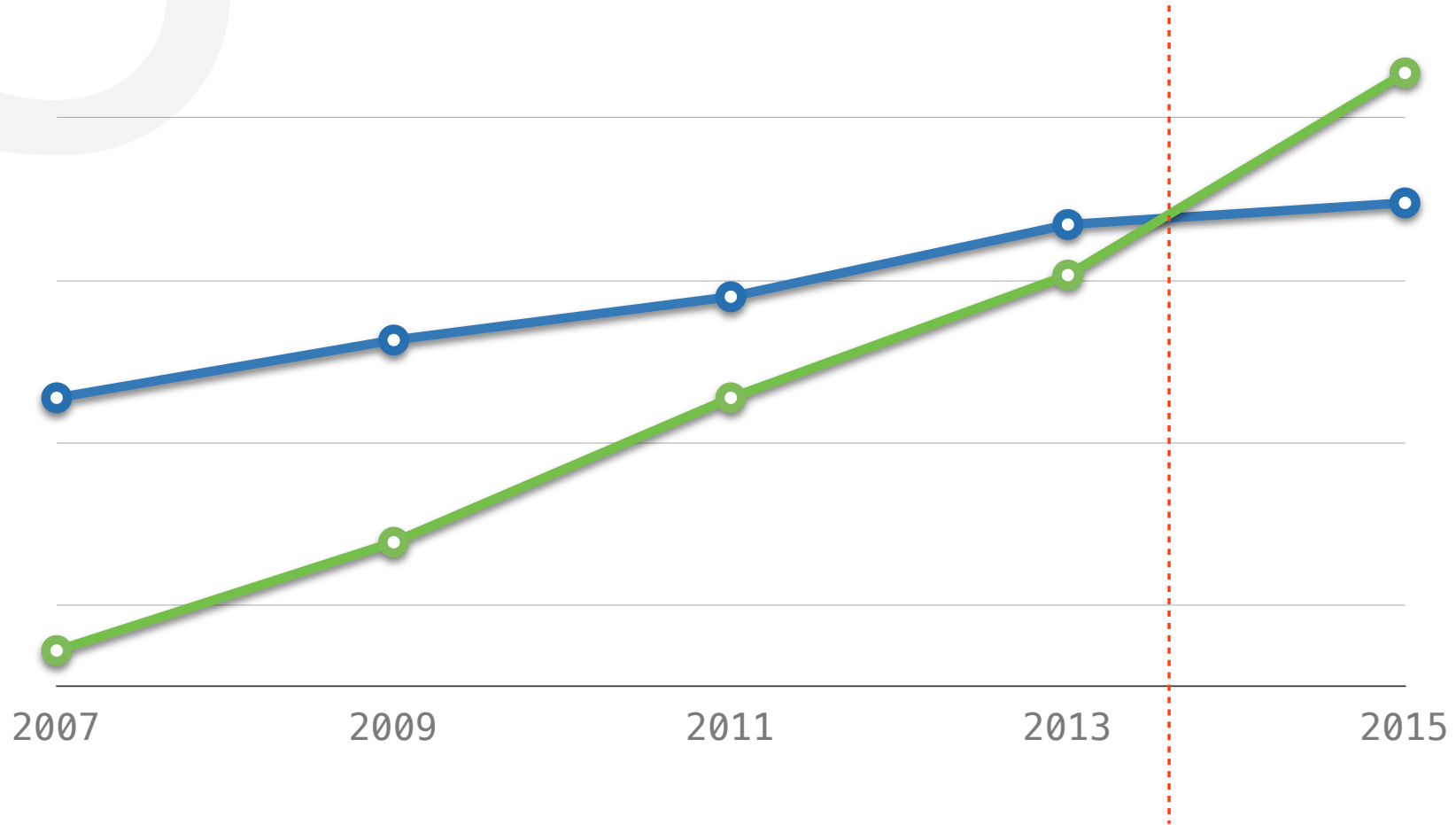


CURRENT

Desktop First



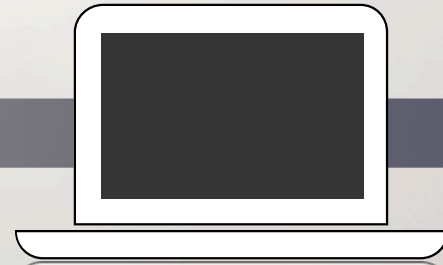
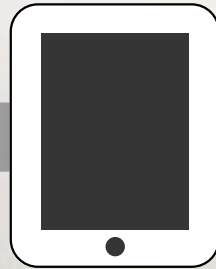
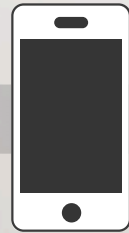
# Mobile vs Desktop





NEXT

# Mobile First





Mobile site

iPad Apps

Website

320 x 480

480 x  
320

768 x 1024

1024 x 768

1680 x 1050

Smart Phones

»

Tablets

»

Netbooks

»

Desk tops



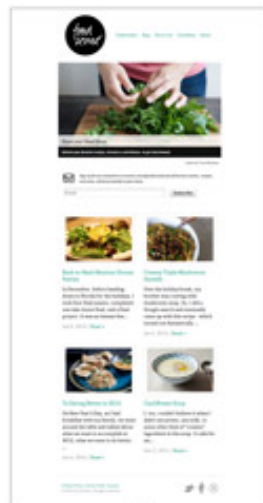


320 wide



iPhone  
(portrait)

480 wide



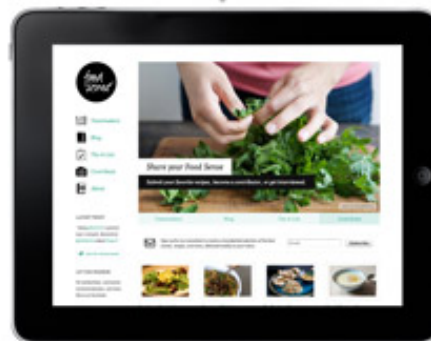
iPhone  
(landscape)

768 wide



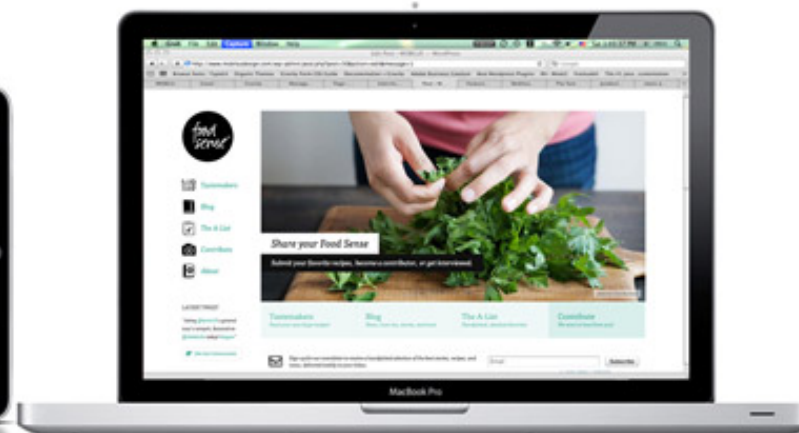
iPad  
(portrait)

1024 wide



iPad  
(landscape)

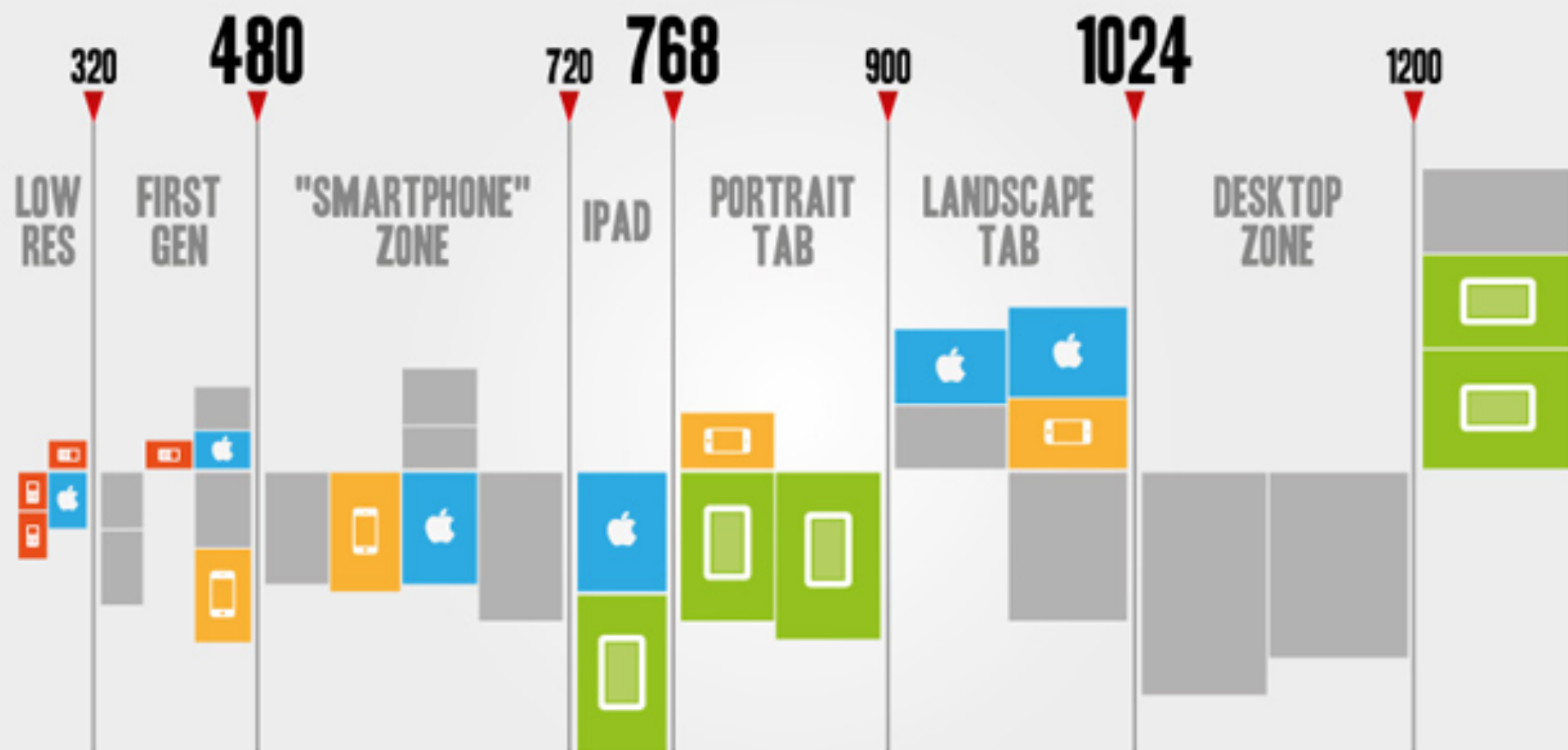
1280 wide



Laptop Computer  
(typical size)

**Responsive Web Design allows your site layout to adapt to multiple screen sizes.**





- 3 **major breaks** : 480 / 768 / 1024
- 3 **minor breaks** : 320 / 720 / 900
- Desktop limit is around 1024px

<http://troy.labs.daum.net/>

모바일 기기 크기파악

<https://mediaqueri.es/>

반응형 웹페이지 제작 예시 페이지

<https://blisk.io/>

모바일, pc 페이지 비교확인

Phones 4-5"  
Phones 5-7"

Tablets  
Hybrid Tablet/Desktops

Desktops

Small  
320-475px

Medium  
480-639px

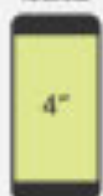
Large  
640-923px

X-Large  
1024-1365px

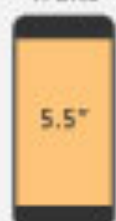
XX-Large  
1366-1920px

XXX-Large  
1920-2559px

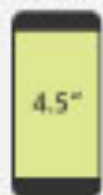
iPhone 5c, 5s  
320x568



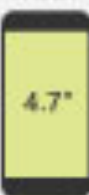
iPhone 6 Plus  
414x736



Nokia Lumia 1020  
384x640



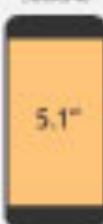
iPhone 6  
375x667



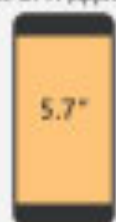
Nokia Lumia 830  
360x640



Samsung Galaxy S5  
360x640



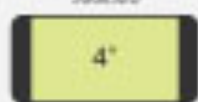
Samsung Galaxy Note 4  
424x768 (approx)



Nokia Lumia 1520  
360x640



iPhone 5c, 5s  
568x320



iPad Mini  
768x1024  
0.6% smaller than iPad



iPad  
768x1024



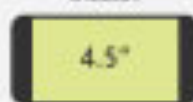
Surface  
768x1066



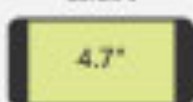
Surface Pro 3  
960x1440



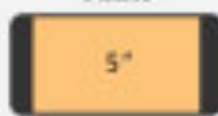
Nokia Lumia 1020  
384x640



iPhone 6  
375x667



Nokia Lumia 830  
360x640



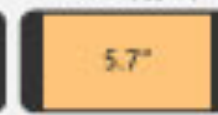
Samsung Galaxy S5  
360x640



iPhone 6 Plus  
736x1114



Samsung Galaxy Note 4  
744x1214 (approx)



Nokia Lumia 1520  
360x640



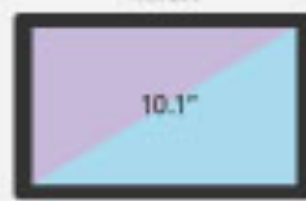
iPad Mini  
824x1156 (30% smaller than iPad)



iPad  
824x1156



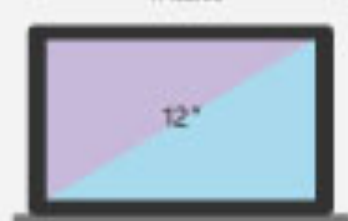
Surface Pro  
768x1066



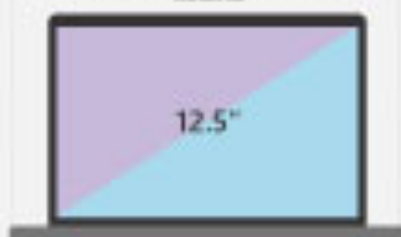
13" MacBook Pro Retina  
1280x800



Surface Pro 3  
1440x960



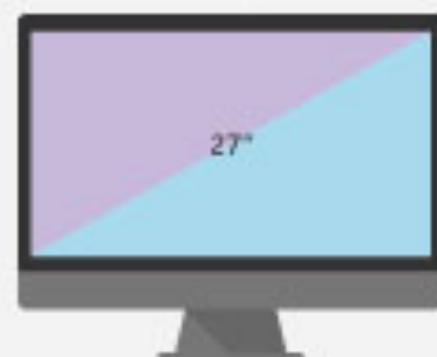
ThinkPad X240 Ultrabook Laptop  
1366x768



LG Flatron E2350V  
1920x1080

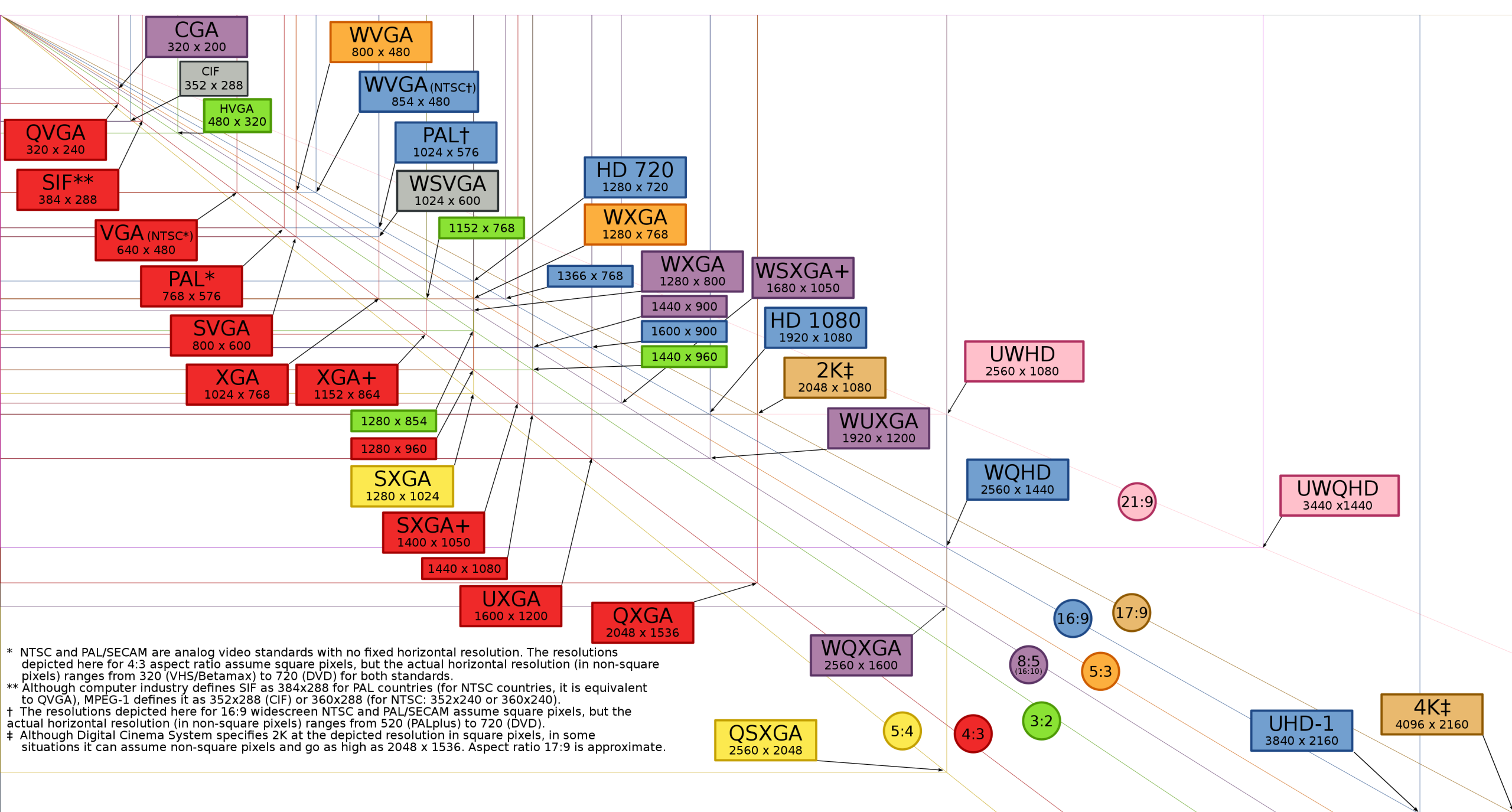


XXX-Large  
2560px and +



HP Z1 G2  
2560x1440







# Getting started

An overview of Bootstrap, how to download and use, basic templates and examples, and more.



Become an engineer - join MakerSquare's 12-week immersive JavaScript classes.

ads via Carbon

## Download

Bootstrap (currently v3.3.5) has a few easy ways to quickly get started, each one appealing to a different skill level and use case. Read through to see what suits your particular needs.

### Bootstrap

Compiled and minified CSS, JavaScript, and fonts. No docs or original source files are included.

Download Bootstrap

### Source code

Source Less, JavaScript, and font files, along with our docs. Requires a Less compiler and some setup.

Download source

### Sass

Bootstrap ported from Less to Sass for easy inclusion in Rails, Compass, or Sass-only projects.

Download Sass

## Bootstrap CDN

The folks over at [MaxCDN](#) graciously provide CDN support for Bootstrap's CSS and JavaScript. Just use these Bootstrap CDN links.

```
<!-- Latest compiled and minified CSS -->
<link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.5/css/bootstrap.min.css">

<!-- Optional theme -->
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.5/css/bootstrap-
theme.min.css">
```

Copy

Download

What's included

Compiling CSS and JavaScript

Basic template

Examples

Tools

Community

Disabling responsiveness

Migrating from 2.x to 3.0

Browser and device support

Third party support

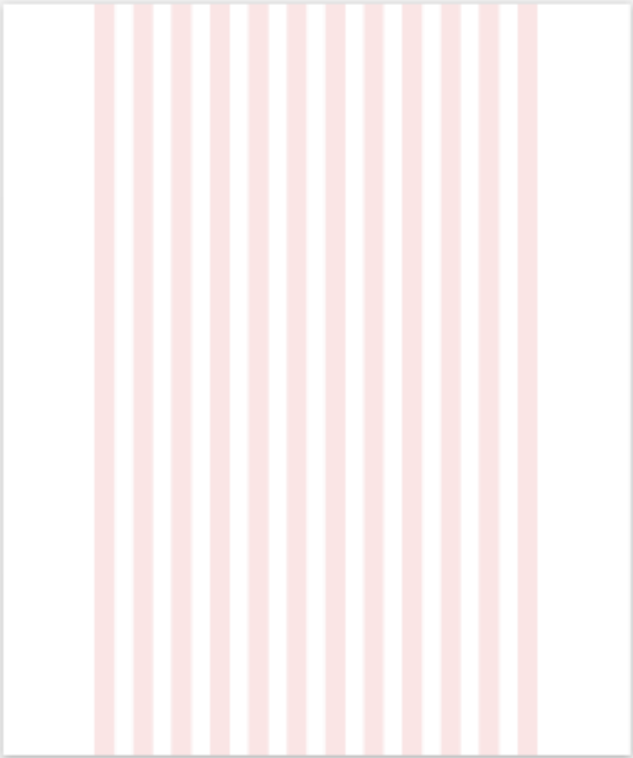
Accessibility

License FAQs

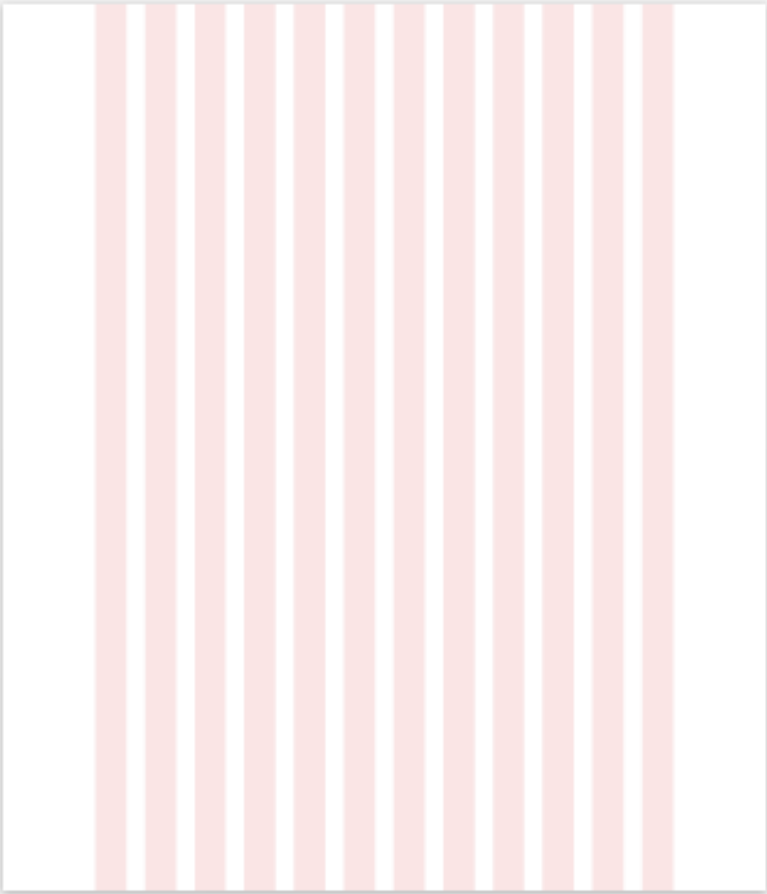
Translations

Back to top

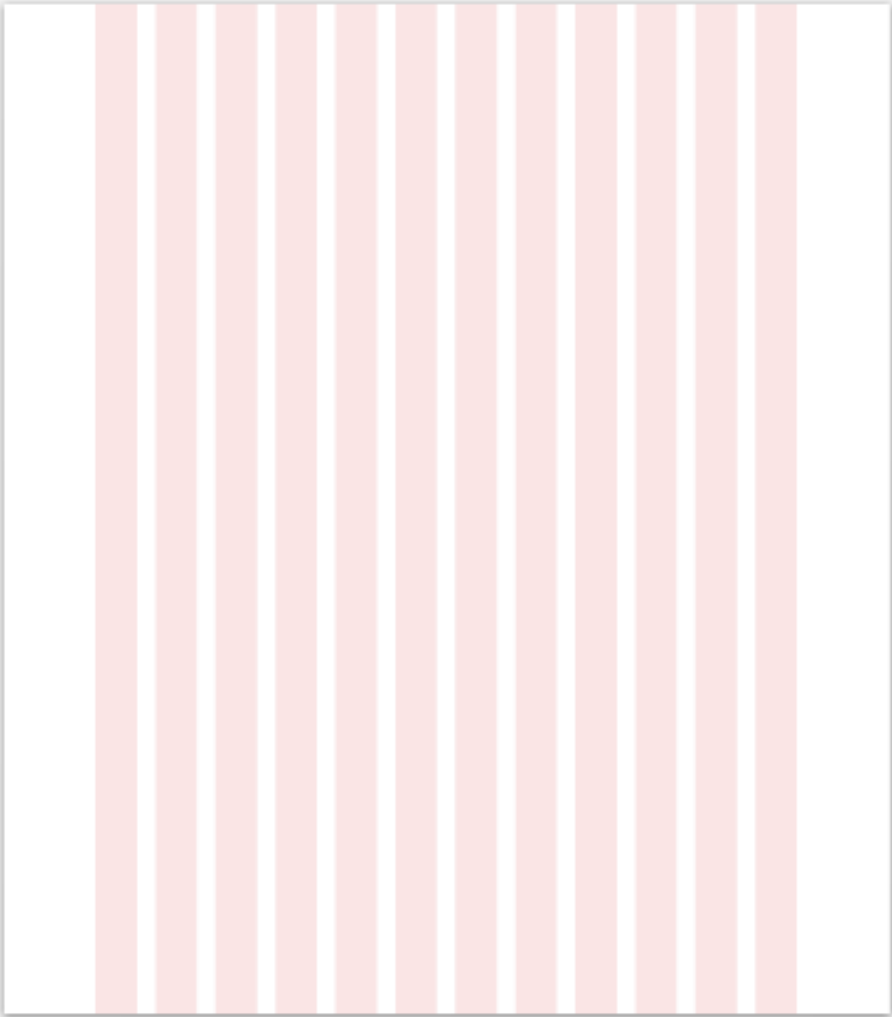
Small Devices ( < 768px )

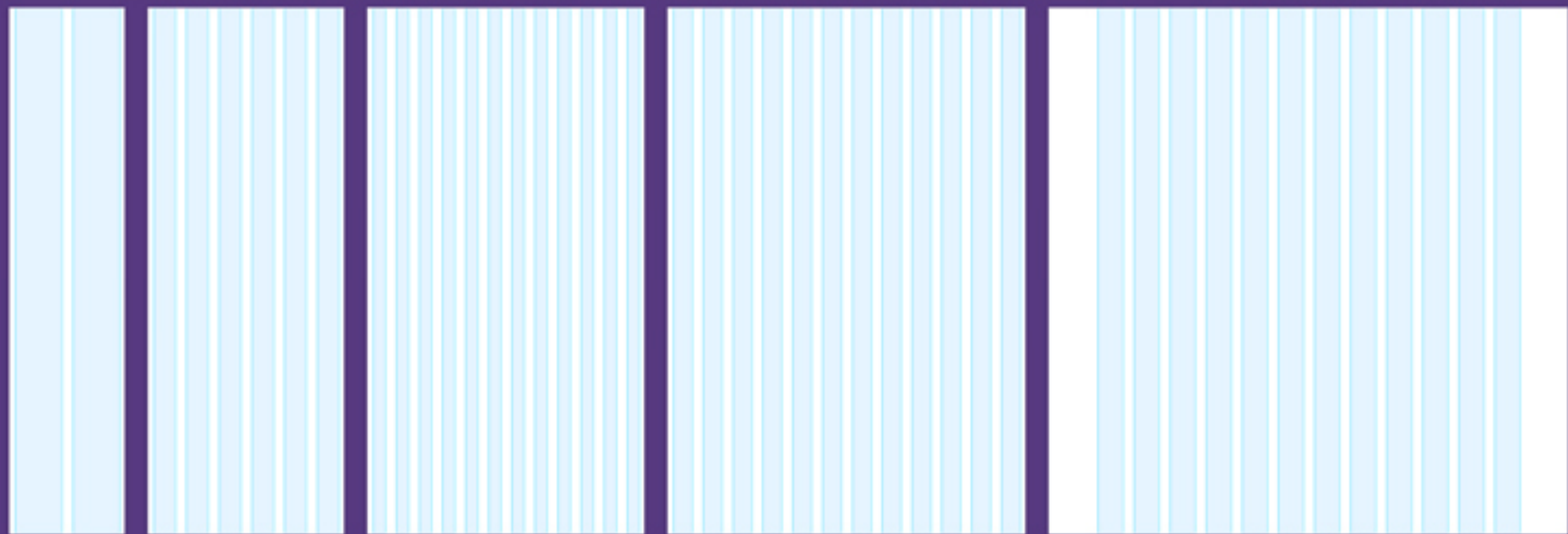


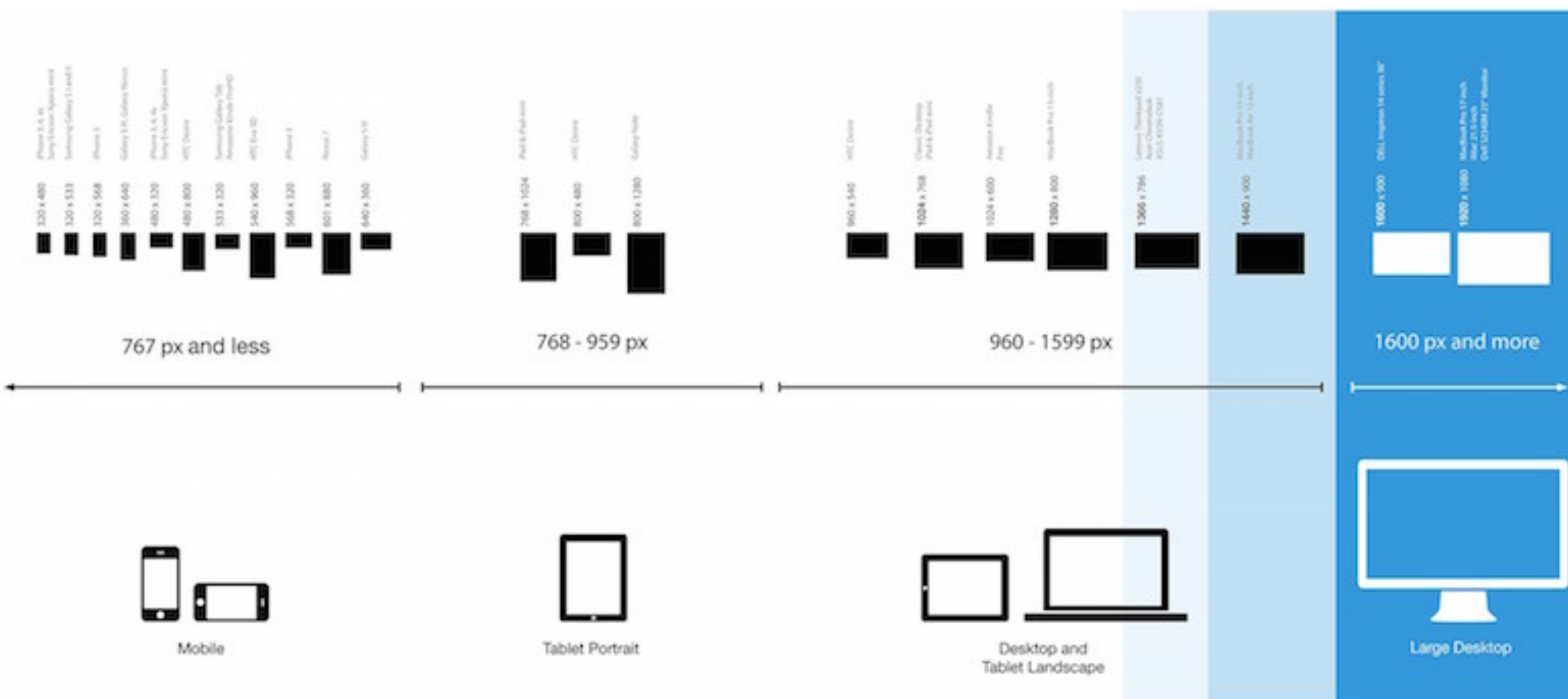
Medium Devices ( ≥ 970px )

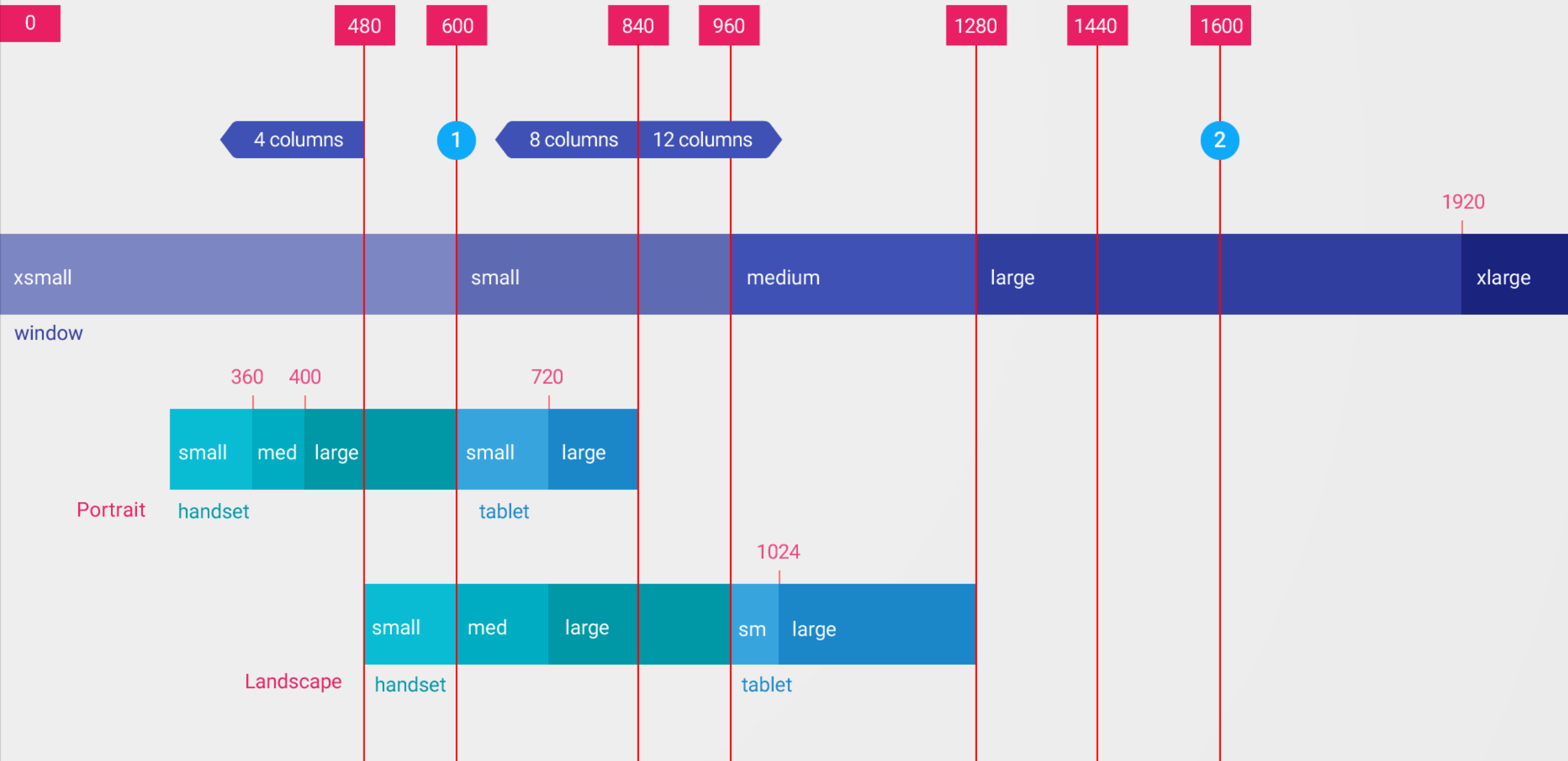


Large Devices ( ≥ 1200px )









# RESPONSIVE BREAKING POINTS

## A VISUAL GUIDE FOR RESPONSIBLE DESIGNERS

---



## DEVICES

come in many shapes and sizes—with new ones hitting the market every day. Instead of attempting to code a media query for each one, streamline to 4 base standard breaking points.



```
/* LANDSCAPE PHONES AND SMALLER */
```

```
@MEDIA
```

```
(MAX-WIDTH: 480PX) { ... }
```



```
/* PORTRAIT TABLETS AND MINI'S TOO */  
@MEDIA
```

```
(MAX-WIDTH: 767PX) { ... }
```



```
/* LANDSCAPE TABLETS */  
@MEDIA
```

```
(MIN-WIDTH: 768PX) AND (MAX-WIDTH: 979PX) { ... }
```



YOUR BASE CSS WILL COVER THE  
“DEFAULT”: 980PX AND UP



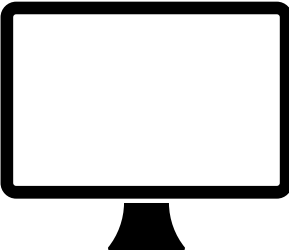
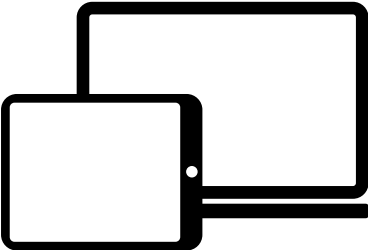
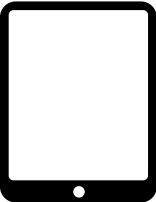
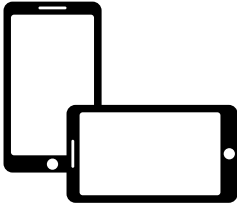
```
/* LARGE DESKTOP */
```

```
@MEDIA
```

```
(MIN-WIDTH: 1200PX) { ... }
```



320      480      600      640      768      1024      1280      1366      1600      1920





320

480

600

640

768

1024  
(960)

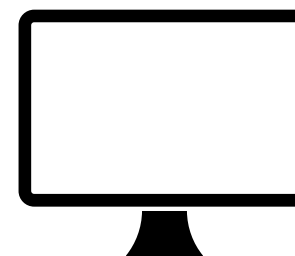
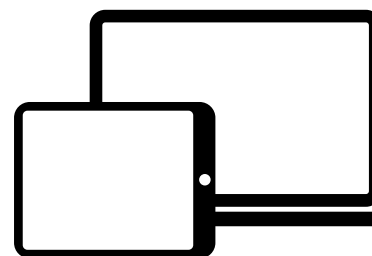
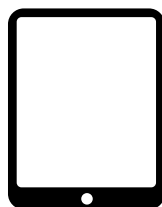
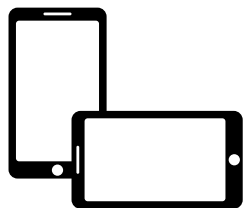
**(960)**

1280

1366

1600

# 1920



320

**480**

600

640

**768**

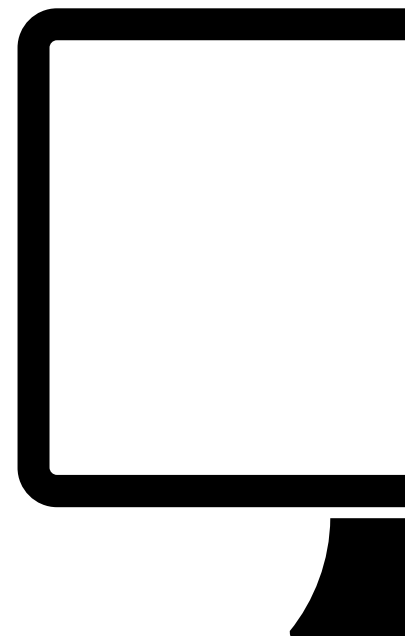
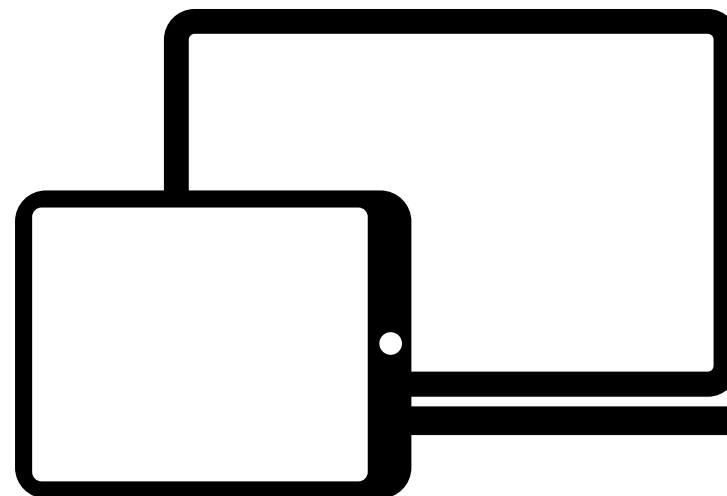
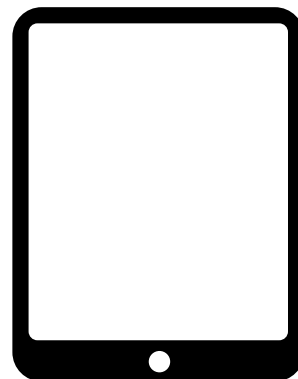
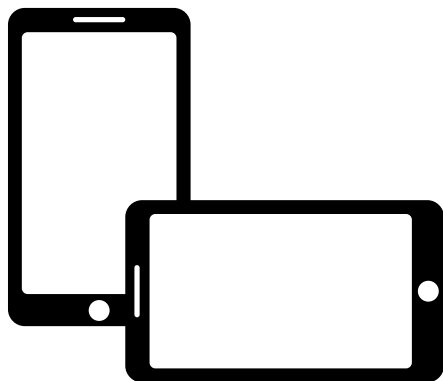
1024  
(960)

1280

**1366**

1600

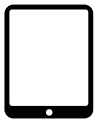
**1920**



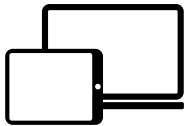
# CSS



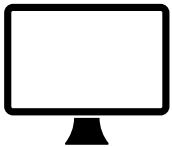
```
/* ~ 480 : mobile(v,h,android-V) */  
@media screen and (max-width: 480px) { }
```



```
/* 481 ~ (767) : tablet(v,h,pc-min) */  
@media screen and (min-width: 481px) and (max-width:767px) { }
```



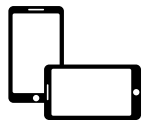
```
/* 768 ~ (1366) : PC(19~), labtop */  
@media screen and (min-width: 768px) and (max-width:1366px) { }
```



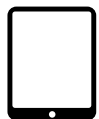
```
/* 1367 ~ full : fullpage(pc full) */  
@media screen and (min-width: 1367px) { }
```

# Javascript(jQuery)

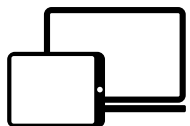
```
var $w = $(window).width();
```



```
if($w <= 480){  
    // ~ 640 기능 구하기
```



```
} else if( ($w > 480) && ($w <= 767) ){  
    // 480 ~ 767기능 구하기
```



```
} else if( ($w > 767) && ($w <= 1366) ){  
    // 768~ 1366 기능 구하기
```



```
} else {  
    // 1366 ~ 기능 구하기
```

```
}
```

## Javascript(jQuery)2

// 스마트폰,태블릿 등 모바일기기의 경우  
스크롤사용시 상단 컨트롤 및 메뉴창이 세로화면이 원활한 화면을 볼수 없기에  
가로화면만 변동되도록 처리한다.

// 화면사이즈변경전 가로값

```
var $w = $(window).width();
```

// 브라우저의 사이즈 변경시

```
$(window).on('resize', function( ) {
```

// 변경된 가로값을 판단(화면 변경시 가져오는 가로값)

```
var nowW = $(window).width();
```

// 가로값이 일치하지 않을경우 새로고침

```
if(nowW !== $w ) {    location.reload(); }
```

```
}); // resize,function
```

// 모바일기기의 경우 세로 스크롤시 상단 주소창이 사라지는현상으로

// 브라우저 크기가 변경됨(resize)을 인지하게 되므로 이를 방지하기위해 설정

CSS

```
@media screen and (max-width: 480px) { }  
@media screen and (min-width: 481px) and (max-width:767px) { }  
@media screen and (min-width: 768px) and (max-width:1366px) { }  
@media screen and (min-width: 1367px) { }
```

js

```
var rwd = function ( ) {  
    var $w = $(window).width();  
    if ($w <= 480) { }  
    else if ( ($w > 480) && ($w <= 767) ) { }  
    else if ( ($w > 767) && ($w <= 1366) ) { }  
    else { }  
};
```

```
var $w = $(window).width();  
$(window).on('resize', function() {  
    var nowW = $(window).width();  
    if ( nowW !== $w ) {  
        location.reload();  
        rwd();  
    }  
});
```



```
var $w = $(window).width();

if($w <= 640){
    // ~ 640 기능 구하기

} else if( ($w > 640) && ($w <= 1024) ){
    // 641 ~ 1024 기능 구하기

} else if( ($w > 1025) && ($w <= 1366) ){
    // 1025 ~ 1366 기능 구하기

} else {
    // 1366 ~ 기능 구하기

}
```

```
var $w = $(window).width();

// 브라우저의 사이즈 변경시
$(window).on('resize', function(){

// 변경된 가로값을 판단하여서
    var nowW = $(window).width();
    // 가로값이 일치하지 않을경우 새로고침

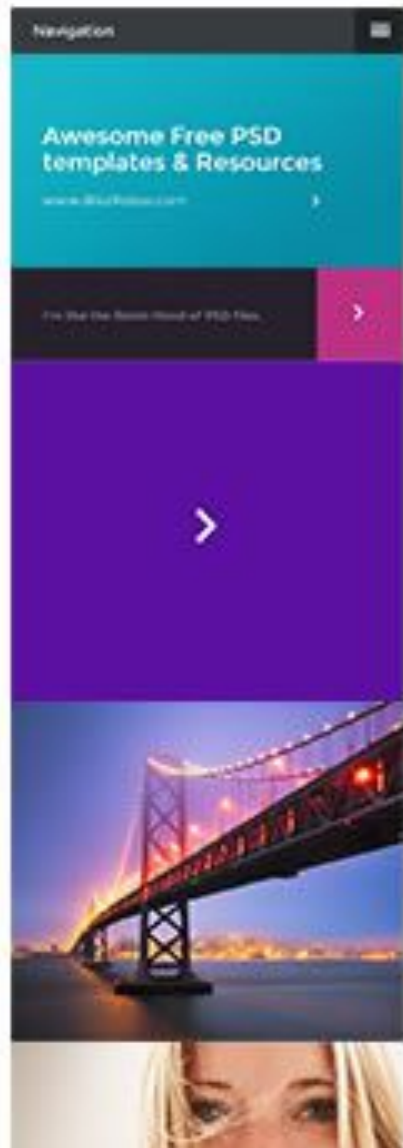
    if(nowW !== $w ) {
        location.reload();
    }

});
```

Desktop with 2 Rows



Desktop with 3 Rows



Desktop with 4 Rows



Desktop with 5 Rows

