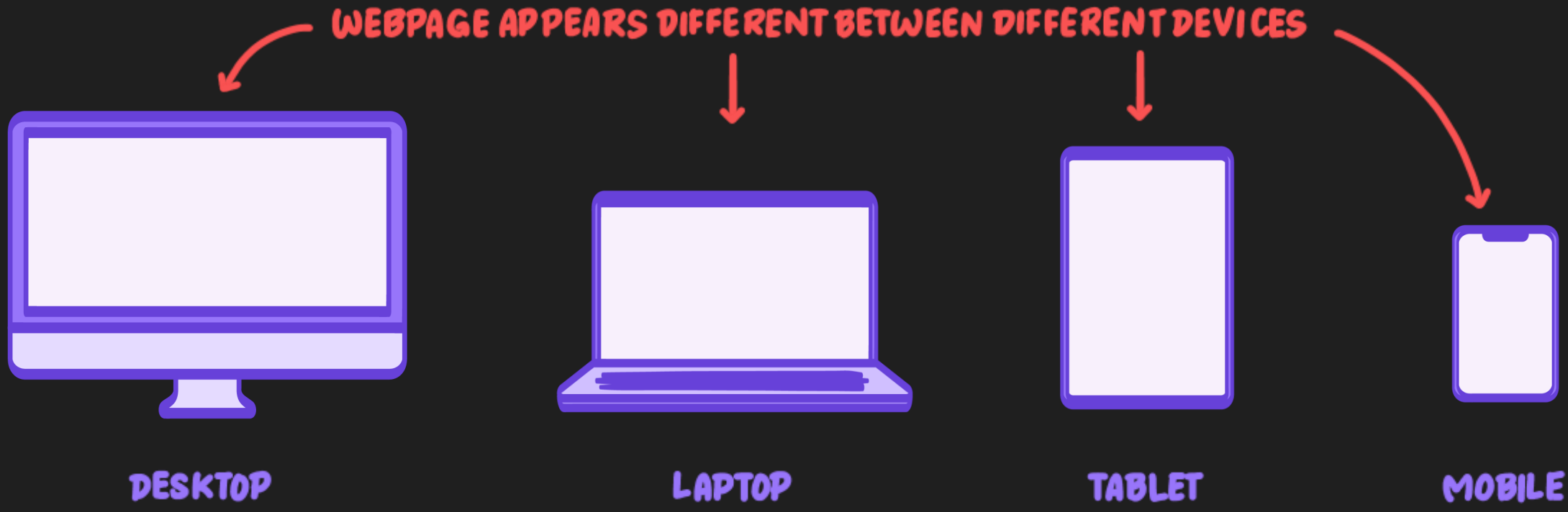
RESPONSIVE DESIGN

WEBPAGES WERE ORIGINALLY DESIGNED ONLY FOR DESKTOP COMPUTERS, AS THEY WERE THE ONLY DEVICES AVAILABLE TO ACCESS THE INTERNET

RESPONSIVE DESIGN

TODAY THERE ARE A VARIETY OF DEVICES WITH DIFFERENT SCREEN SIZES SO WEBPAGES NEED TO ADAPT FOR A MORE FUNCTIONAL USER EXPERIENCE



RESPONSIVE DESIGN

RESPONSIVE DESIGN IS POWERED BY THREE MAIN PILLARS

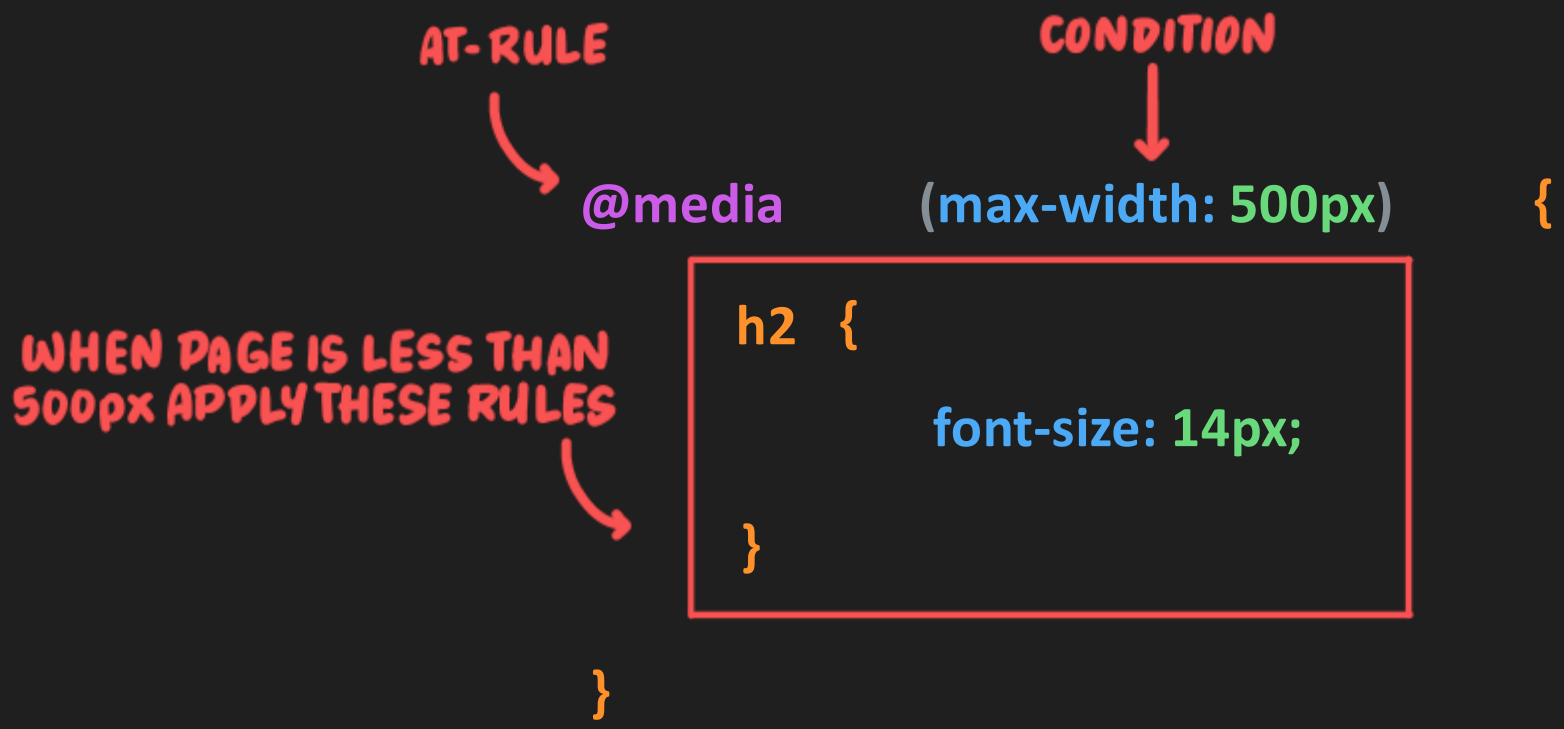
RELATIVE UNITS

FLUID LAYOUTS

MEDIA QUERIES

MEDIA QUERIES

APPLIES STYLES TO A WEBPAGE BASED ON SPECIFIC CONDITIONS



MEDIA QUERIES

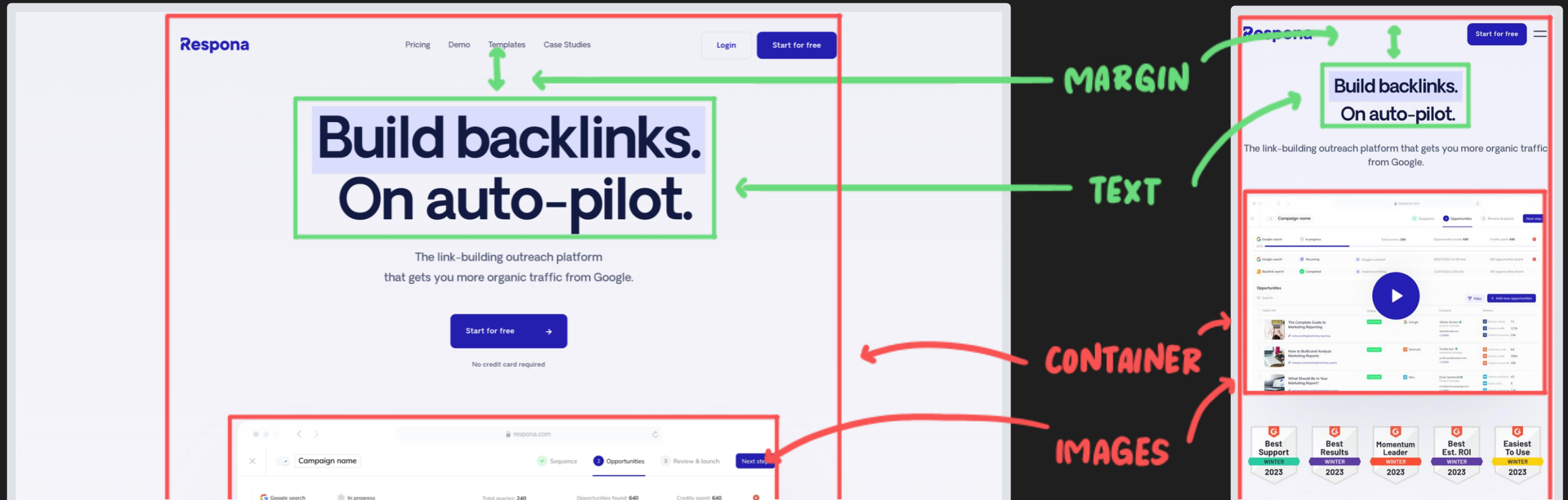

```css
@media (max-width: 1500px) {
    h2 {
        font-size: 24px;
    }
}

@media (max-width: 1000px) {
    h2 {
        font-size: 18px;
    }
}

@media (max-width: 500px) {
    h2 {
        font-size: 14px;
    }
}
```

RELATIVE UNITS

ELEMENTS SCALE PROPORTIONALLY BASED ON PARENT CONTAINER SIZE OR SCALABLE REFERENCE POINTS

PERCENTAGES

REMS



REMS INSIDE MEDIA QUERY CONDITIONS

INSIDE BRACKETS

THE REM VALUE INSIDE A MEDIA QUERY CONDITION IS ALWAYS BASED ON THE DEFAULT BROWSER FONT SIZE

16px

CSS

62.5% x 16px = 10px

```
html {
    font-size: 62.5%;
}

h1 {
    font-size: 4rem;
}

p {
    font-size: 2rem;
}
```

1rem = 10px

MEDIA QUERY CONDITION

```
@media (max-width: 31.25rem) {


}
```

1rem = 16px

DEFAULT BROWSER FONT SIZE

31.25rem x 16px = 500px

REMS INSIDE MEDIA QUERIES

REM VALUES SCALE PROPORTIONALLY, ADJUSTING BOTH EXISTING AND NEW VALUES BASED ON THE UPDATED ROOT FONT SIZE

CSS

```
html {
    font-size: 62.5%;
}

h1 {
    font-size: 10rem;
    padding: 5rem
}
```

62.5% x 16px = 10px

1rem = 10px

8px / 10px = 80%

MEDIA QUERY

```
@media (max-width: 62.5rem) {
    html {
        font-size: 50%;
    }

    a {
        padding: 2rem 4rem;
    }
}
```

16px 32px

50% x 16px = 8px

1rem = 8px

EXISTING PROPERTIES USING REMS

ALL PROPERTIES USING REMS WILL AUTOMATICALLY SHRINK TO 80% OF THEIR ORIGINAL SIZE

NEW PROPERTIES INSIDE MEDIA QUERY

NEW PROPERTIES ADDED WITH REM WILL BE BASED ON NEW PIXEL VALUE, NOT 10PX

PAINFUL!

REMS INSIDE MEDIA QUERIES

WHEN ADDING NEW REM VALUES INSIDE A MEDIA QUERY SELECT VALUES YOU WOULD USE FOR THE BASE CASE AND IT WILL SCALE AUTOMATICALLY

CSS

```css
html {
    font-size: 62.5%;
}

h1 {
    font-size: 10rem;
    padding: 5rem
}
```

MEDIA QUERY

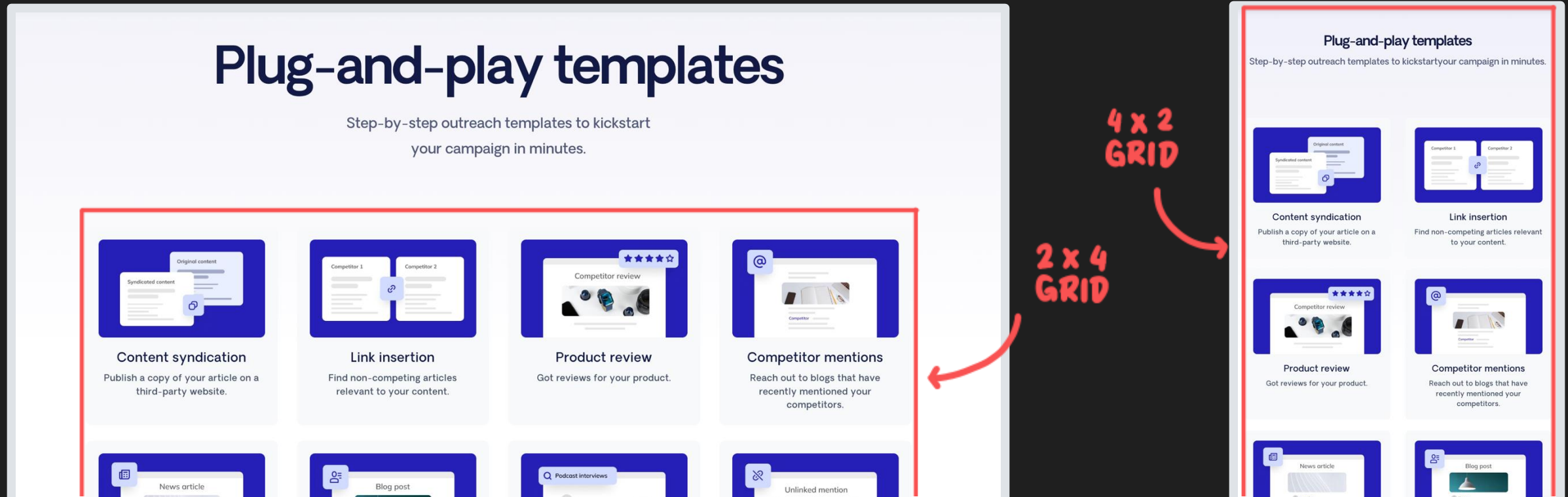
```css
@media (max-width: 62.5rem) {
    html {
        font-size: 50%;
    }

    a {
        padding: 2rem 4rem;
    }
}
```

THINK AS IF:
1rem = 10px

DON'T WORRY ABOUT EXACT PIXEL VALUES FOR EACH MEDIA QUERY. FOCUS ON WHAT YOU WOULD DO ON THE BASE CASE

FLUID LAYOUTS

USING FLEXBOX & CSS GRID ALLOW LAYOUTS TO DYNAMICALLY ADJUST IN SIZE AND POSITION EASILY

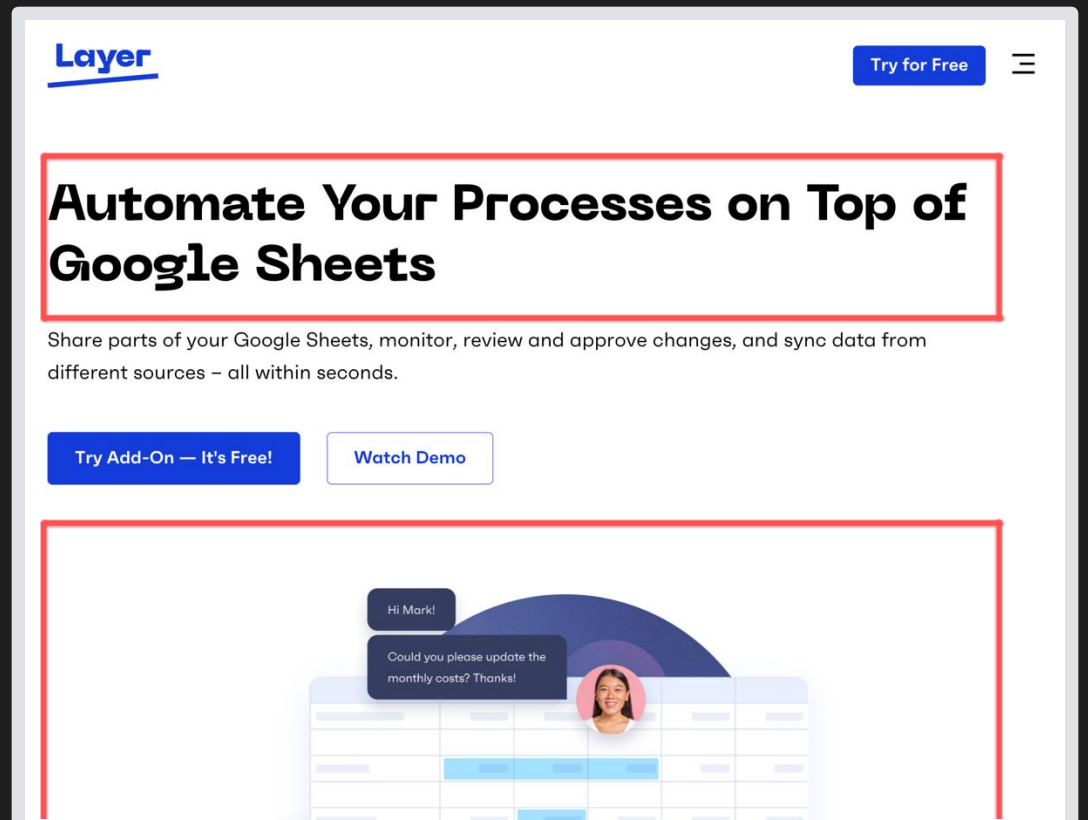


WHAT ARE BREAKPOINTS?

A SPECIFIC SCREEN WIDTH WHERE A WEBPAGE'S LAYOUT CHANGES

981px

980px BREAK POINT



SELECTING BREAKPOINTS

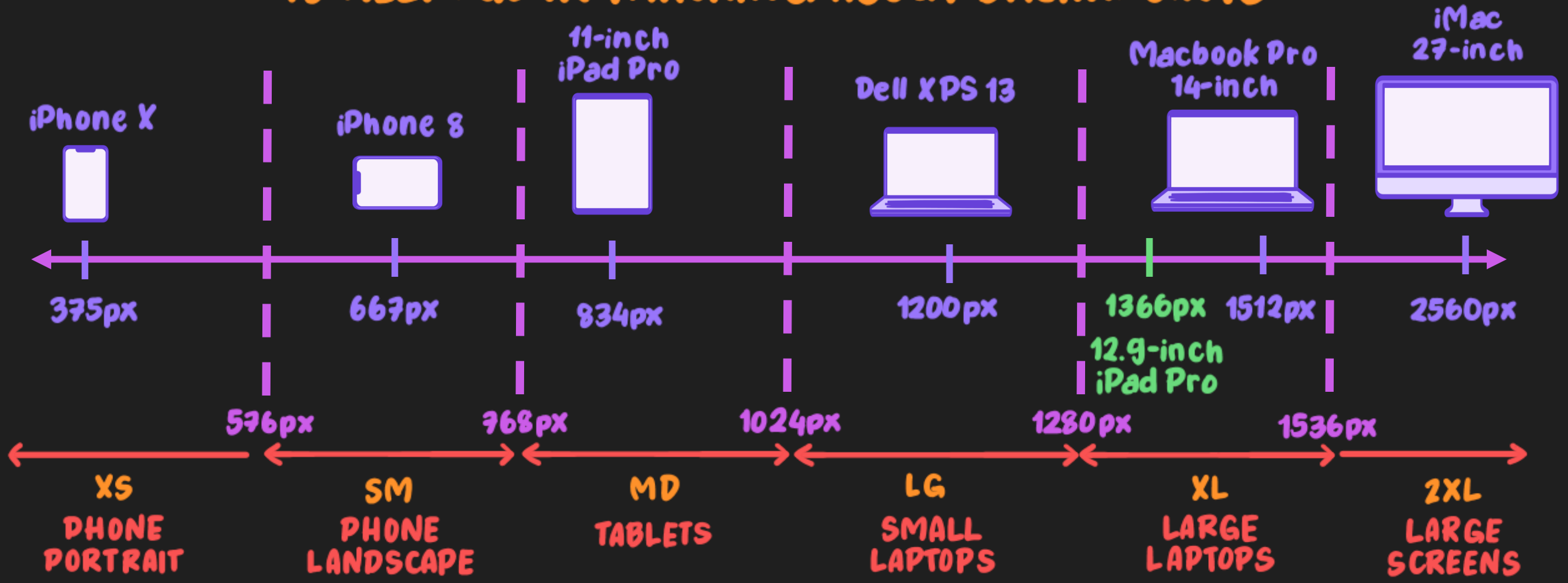
SELECTING BREAKPOINTS FOR SPECIFIC DEVICES
IS IMPRACTICAL AS THERE ARE TOO MANY TO CATER FOR

HUNDREDS OF DIFFERENT SCREEN WIDTHS

SELECTING BREAKPOINTS

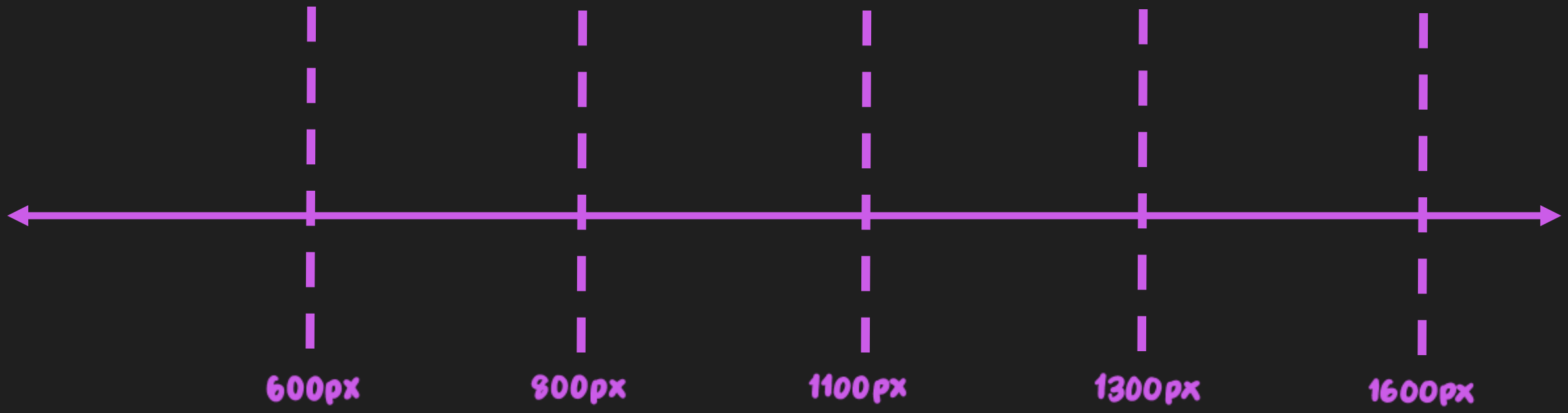
NO UNIVERSAL STANDARD

KNOWING THE RANGES OF COMMON DEVICE SCREEN SIZES IS HELPFUL IN THINKING ABOUT BREAKPOINTS



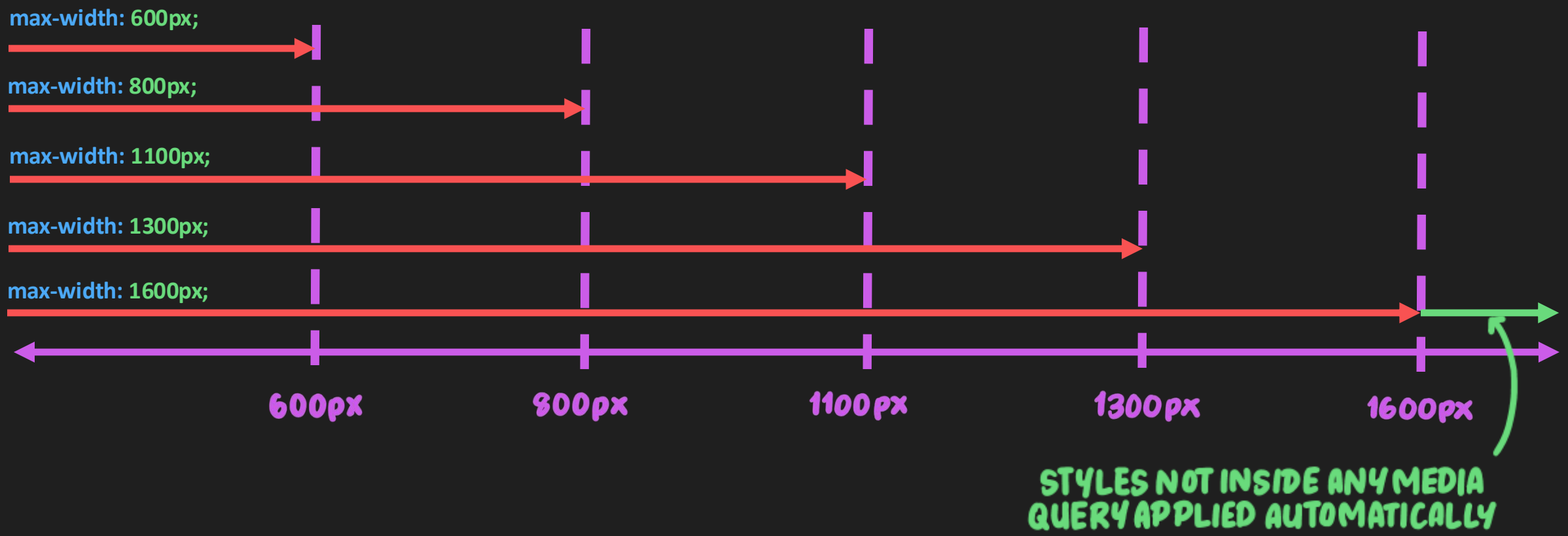
SELECTING BREAKPOINTS

ULTIMATELY, SELECTING BREAKPOINTS SHOULD BE DESIGN-LED & DETERMINED BY OBSERVING WHERE THE LAYOUT NATURALLY 'BREAKS'



SELECTING BREAKPOINTS

WHEN USING MAX-WIDTH IN MEDIA QUERIES, THERE'S NO NEED TO SET A MAXIMUM RANGE BECAUSE STYLES WILL BE APPLIED AUTOMATICALLY



SUMMARY CARD

RESPONSIVE DESIGN

MEDIA QUERIES

APPLIES STYLES BASED ON DIFFERENT DIFFERENT SCREEN SIZES

DEFAULT BROWSER FONT SIZE OF 16px

```
@media (max-width: 62.5rem) {
    html {
        font-size: 50%;
    }

    a {
        padding: 2rem 4rem;
    }
}
```

EXISTING PROPERTIES USING REM VALUES WILL ADJUST

NEW PROPERTIES ARE BASED ON NEW PIXEL VALUE

THINK AS IF 10px

16px x 50% = 8px

1 rem = 8px

BREAKPOINTS

A SPECIFIC SCREEN WIDTH WHERE A WEBPAGE LAYOUT CHANGES