Real world CSS custom properties

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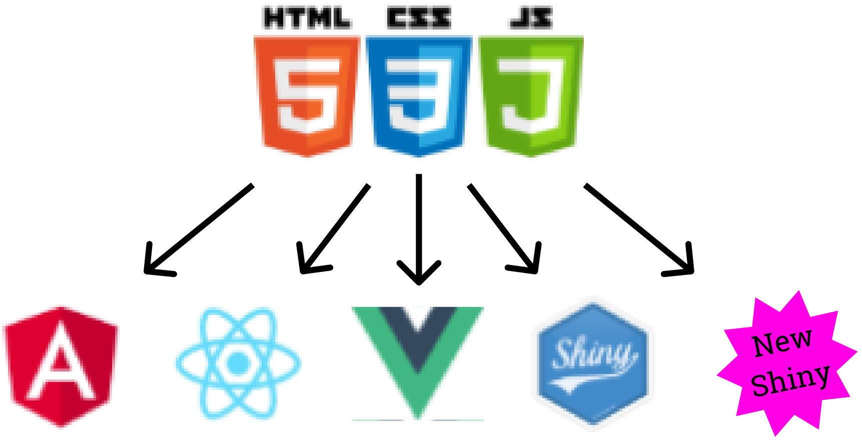
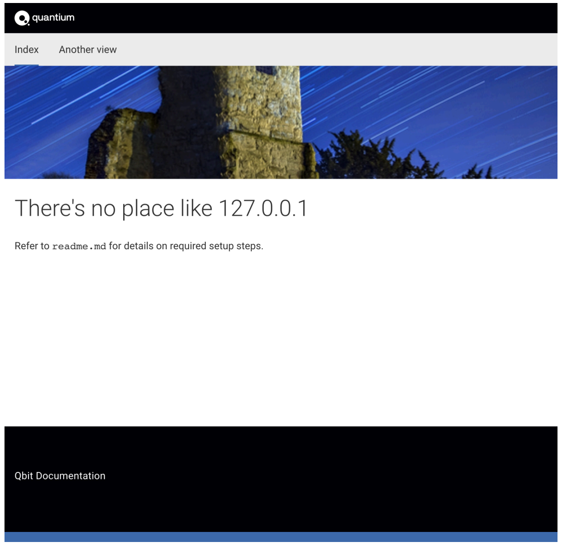
qbit

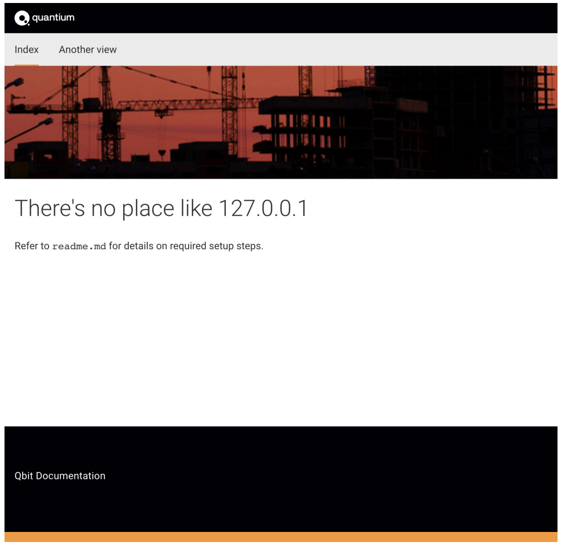

HTML
CSS
JS
Shiny
New Shiny



There's no place like 127.0.0.1

Refer to `readme.md` for details on required setup steps.

Qbit Documentation



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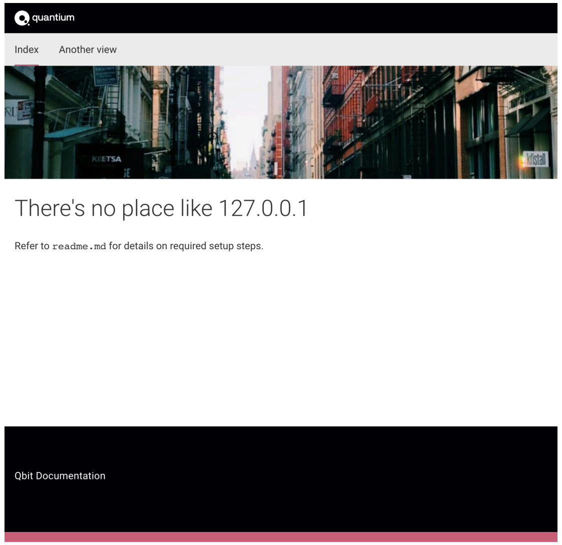

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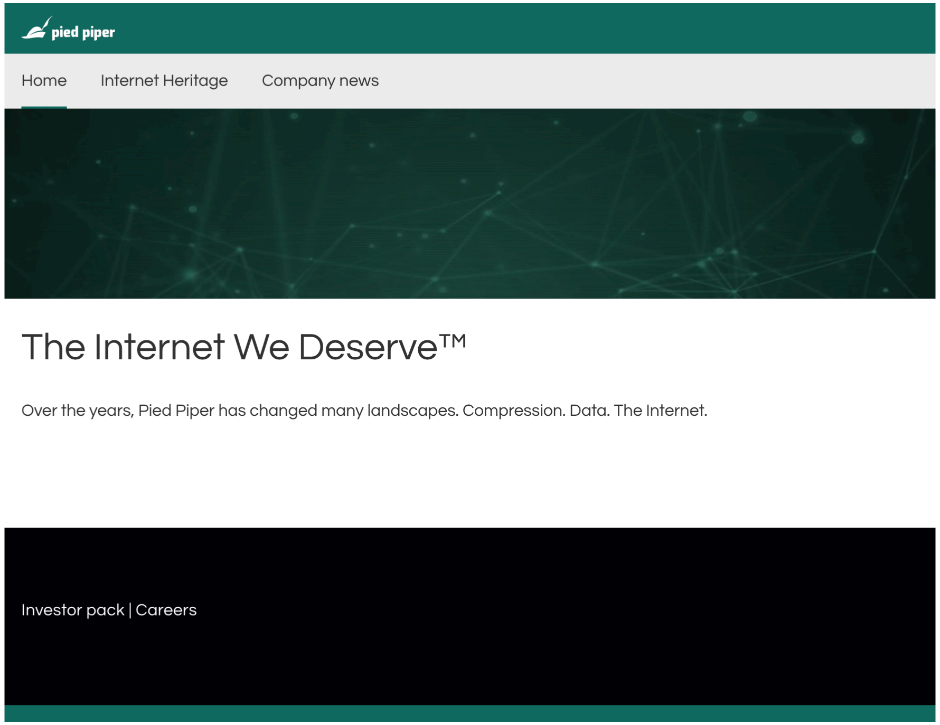
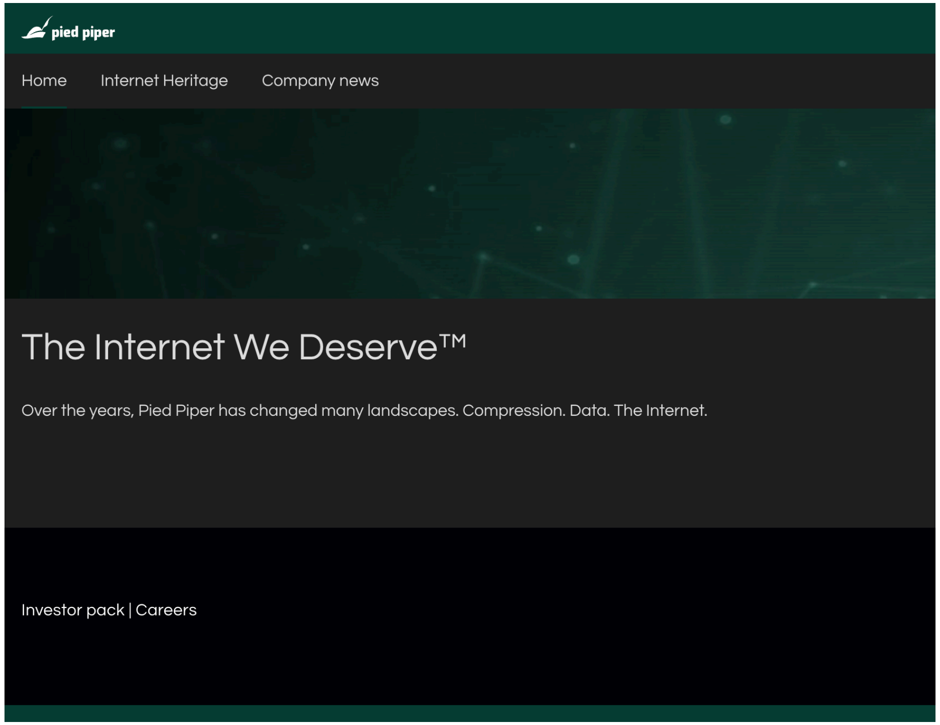


The Internet We Deserve™

Over the years, Pied Piper has changed many landscapes. Compression. Data. The Internet.



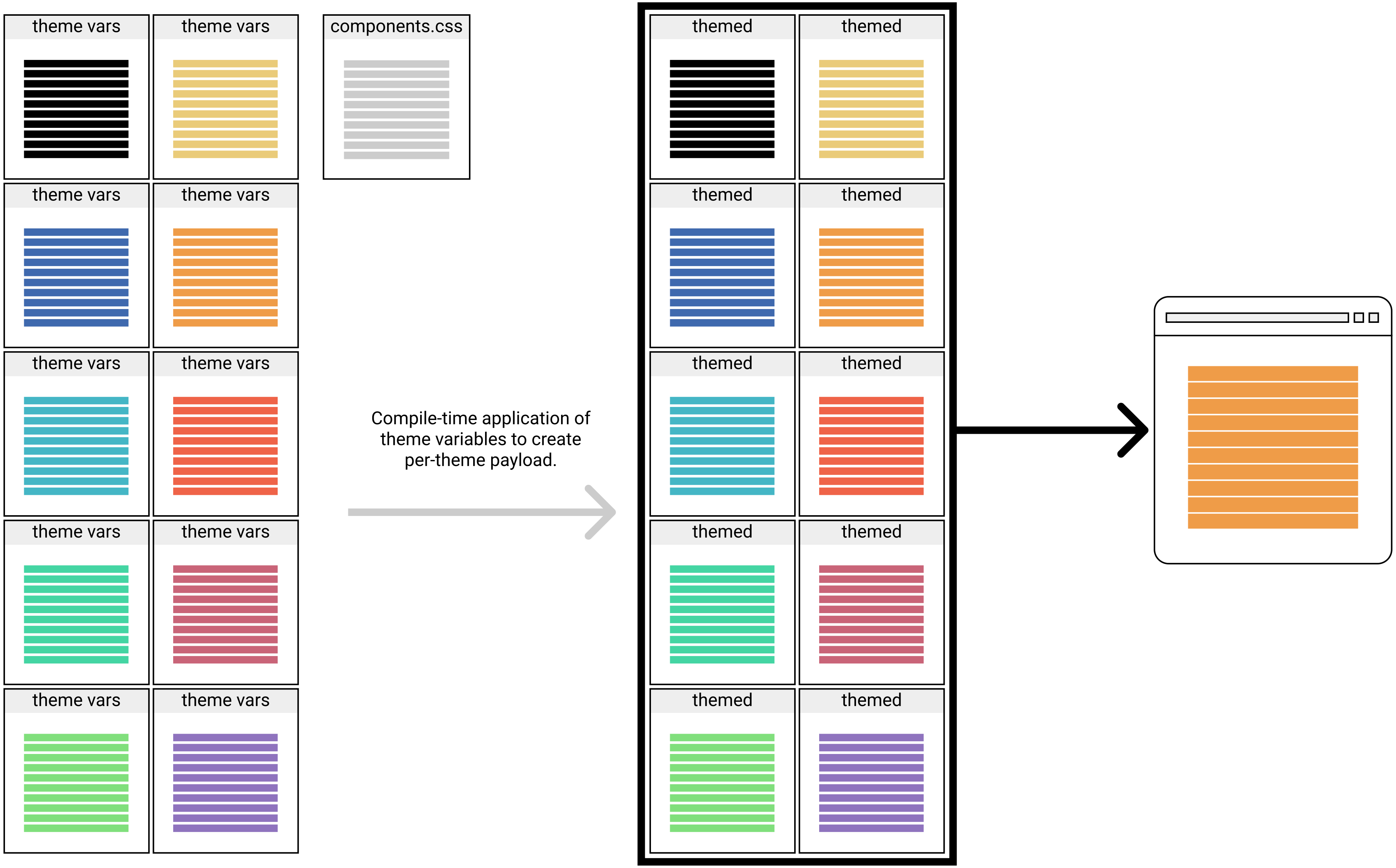
The Internet We Deserve™

Over the years, Pied Piper has changed many landscapes. Compression. Data. The Internet.

SCSS for style API & customisation

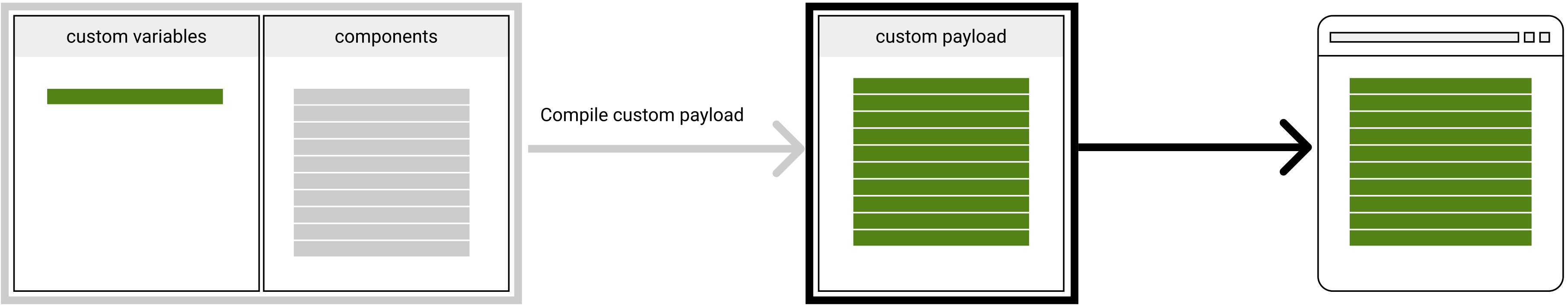
- Imposes stack choice on consumer :(
- Precompiled modifications only :-/
- Provides error handling :)

SCSS for themes



Compile-time application of theme variables to create per-theme payload.

SCSS for customisation



I wanted a better way

- Native portability
- Runtime features
- Easier customisation

Qbit private API

- HTML
- CSS
- ES6

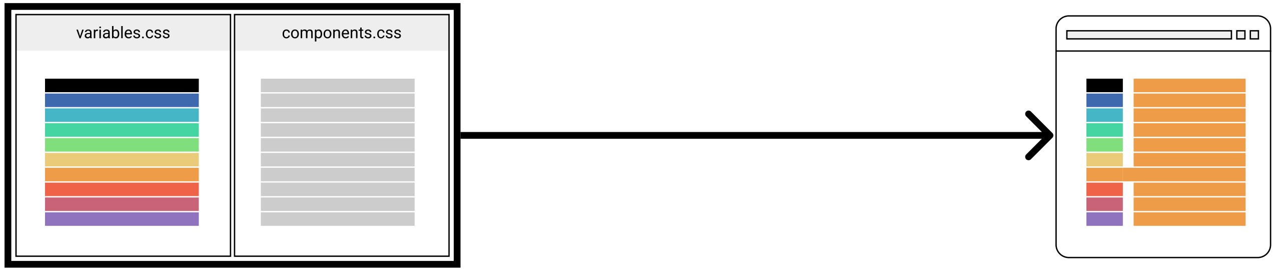
Qbit Public API

- Templates
- ~~SCSS variables~~
- CSS custom props
- JSON design tokens

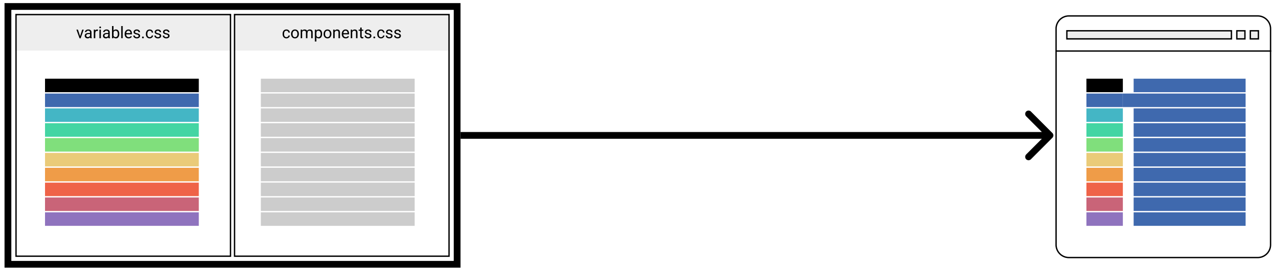
Implementation: CSS custom prop themes

```css
:root {
  /* common variables */
}
[data-qtheme="blue"] {}
[data-qtheme="green"] {}
```

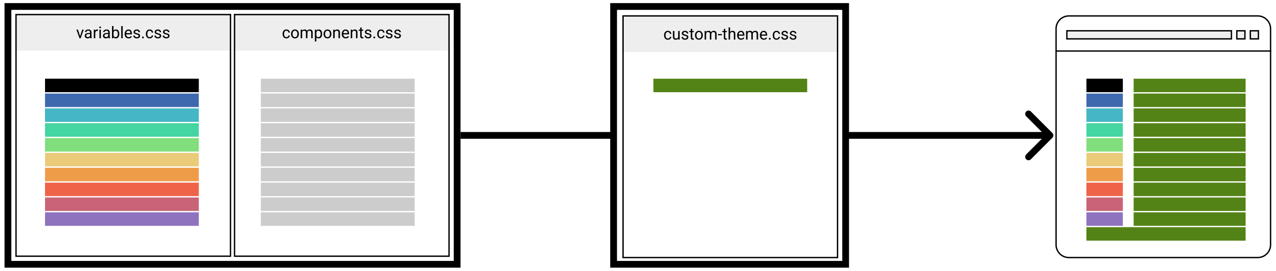
CSS variable payload



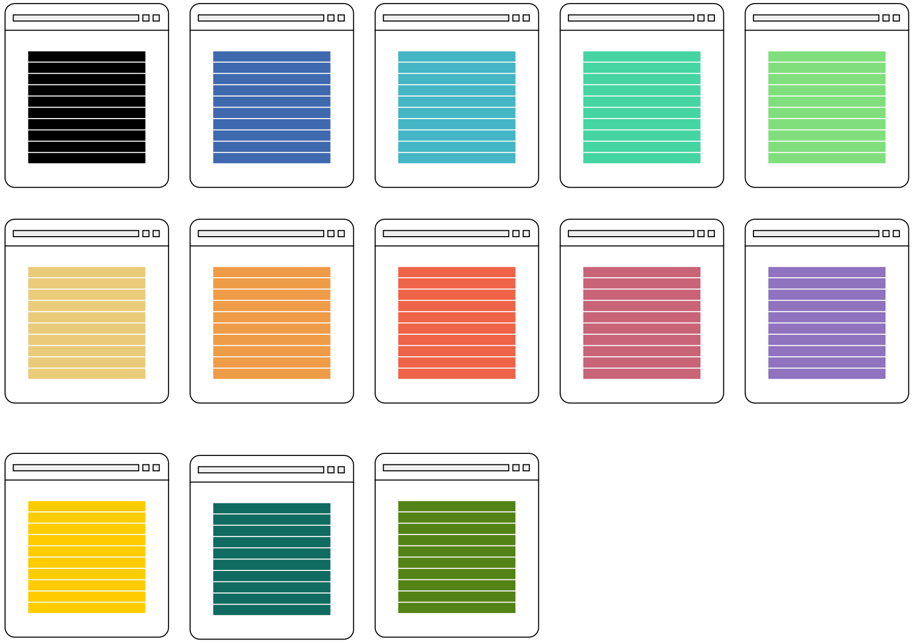
CSS variable payload

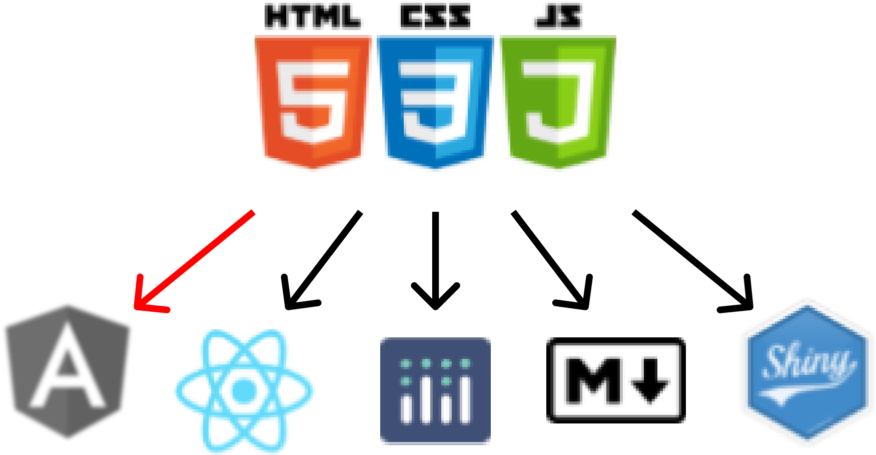


Custom theme



So how is it going?




HTML
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Targeted customisation

```
[data-qtheme="entirecustomtheme"] { }

.element-override {}

.contextual-override .element {}

#instance-override {}
```

Terse customisation

```
.element-override {
  property: value;
  .subelement1-override {
    property: value;
  }
}
```

```
.element-override {
  --prop: val;
}
```

IE11 was fine

```
postcss([
  postCSSCustomProperties({
    importFrom: './dist/css-variables.css'
  }),
  postCSSCalc()
]))
```

```
.selector {
  margin-top: 40px;
  margin-top: calc(var(--space-l) * 1.25);
}
```

I quickly missed SCSS errors

```
Error: Undefined variable: "$button-border-widht".
  on line 31 of path/to/button.scss
  from line 8 of path/to/qbit-all.scss
>> -width: #{$button-border-widht};
   -------------------------------^
```

Non-draconian error handling...

```css
.selector {
  color: var(--colour-that-does-not-exist);
}
```

...means this does not throw an error.

Stylelint to the rescue!

```
"plugins": [
  "stylelint-scss",
  "stylelint-value-no-unknown-custom-properties"
]
```

```
path/to/component.css
 85:18  ✖  Unexpected custom property
 "--colour-hoover" inside declaration "color".
```

A shout out to calc()

```
--header-height: calc(var(--grid-unit) * 12);
```

So what went....not so well?

SCSS habits

```scss
$variant1: value;
$variant2: value;
```

```scss
// just do this in every file! it's all good!
@import "_import-vars-everywhere.scss";

.elementvariant1 {
  color: $variant1;
}
.elementvariant2 {
  color: $variant2;
}
```

All aboard the bloat boat

```
@import "_repeat-your-css-vars-everywhere.scss";
```

Be sure to only import your CSS vars once 😳

Bloat fixed, debugging broken

```
path/to/component.css
 85:18  ✖  Unexpected custom property
 "--valid-property" inside declaration "color".
```

Browser: ✓ Build: ✖

Perfect timing!

```
importFrom: './dist/css-variables.css'
```

A bad habit amplified

```
$colour-text: value;
$colour-link: value;
```

Don't forget the namespace

```
--qbit-colour-text: value;
--qbit-colour-link: value;
```

A fundamental CSS habit

```
.element {}

.elementvariant1 {}

.elementvariant2 {}
```

A fundamental CSS habit flipped

```css
.variant1 {
  --text-colour: #000;
}
.variant2 {
  --text-colour: #222;
}

.element {
  color: var(--text-colour);
}
```

SCSS does this for themes

theme1.scss `$colour: colour1;`

theme2.scss `$colour: colour2;`

component.scss

```
.element {
  color: $colour;
}
```

...but not variants

theme1.scss

```
.element {
  color: $colour;
}
.elementvariant1 {
  color: $anothercolour;
}
.elementvariant2 {
  color: $someothercolour;
}
```

Configuration-driven CSS

```css
.variant1 {
  --text-colour: #000;
}
.variant2 {
  --text-colour: #222;
}

.element {
  color: var(--text-colour);
}
```

SCSS habit: component vars

```
$theme-var: value;
```

```
$component-proxy-var: $theme-var;

.component {
  color: $component-proxy-var;
}
```

They really aren't variables

```
:root              { --cp: value1; }
.selector          { --cp: value2; }
.scope .selector   { --cp: value3; }
#hammer            { --cp: value4; }
```

The normal rules of CSS determine which will apply.

SCSS habit: component vars

Beware of impacts to your style API.

```
.custom-theme {
  --theme-var: value;
  --component-var: value;
}
```

SCSS habit: component vars

```
:root {
  --theme-var: value;
}
```

```
.component {
  --component-var: var(--theme-var);
  color: var(--component-var);
}
```

In summary...

In summary...

CSS custom properties are awesome
and we're not looking back!

Key benefits of CSS custom properties

- Zero build
- Easy customisation
- Runtime power
- Portability

Portability *wins*

Anything that can produce HTML can use Qbit's CSS API.

Embracing Custom Properties

- Build new habits
- They *aren't* variables
- Use the power of specificity and the cascade
- Think *config-driven style*

Use native CSS!

-fin-

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