

Declarative Shadow DOM

and the future of Drupal Theming

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Drupal & React Frontend Developer



DrupalCon
Vienna 2025
14 - 17 October



Who is JohnAlbin?

- Web developer since 1993
- Drupal dev since 2004
- Drupal core dev since 2006
- MAINTAINERS.txt since 2010
- 70+ presentations and keynotes in 4 continents



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Why now?

This is my **2nd**
web components presentation.

The first was in **2014**.



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Baseline



Limited availability



Newly available

August 5, 2024



Widely available

February 5, 2027

Everything **old** is *new*

Old School:

PHP server-side renders

New School:

React.js' new Server Components
and Client Components

Newer School:

PHP server-side renders



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Split components

aka. progressive enhancement

1. Server part

(with no client-side JavaScript)

2. Client part

(with client-side JavaScript)



Split components (2023)



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React.js

Web Components

Server Components

no solution

Client Components

vanilla JavaScript



Split components (2024)



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React.js

Web Components

Server Components

vanilla HTML w/
Declarative Shadow DOM

Client Components

vanilla JavaScript



Web components

95% working LIVE DEMO!

1. Custom elements
2. Templates
3. Shadow DOM



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customElements.define()



means no more

**Drupal.behaviors or
Drupal.once()**



Shadow DOM + CSS

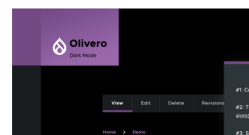


Olivero Dark Mode

[View](#) [Version control](#)

A sub-theme of Olivero that responds to your operating system's dark mode. This theme supports Olivero's ability to change its primary color too.

This theme uses the Newly Available Baseline 2024 CSS color function, `light-dark()`. This color function is specifically designed for dark mode color schemes and *will* be the way web developers implement this feature. However, this color function won't be considered Widely Available until November 2027.



Maintainers

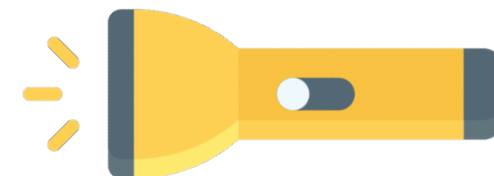


iohnaibin

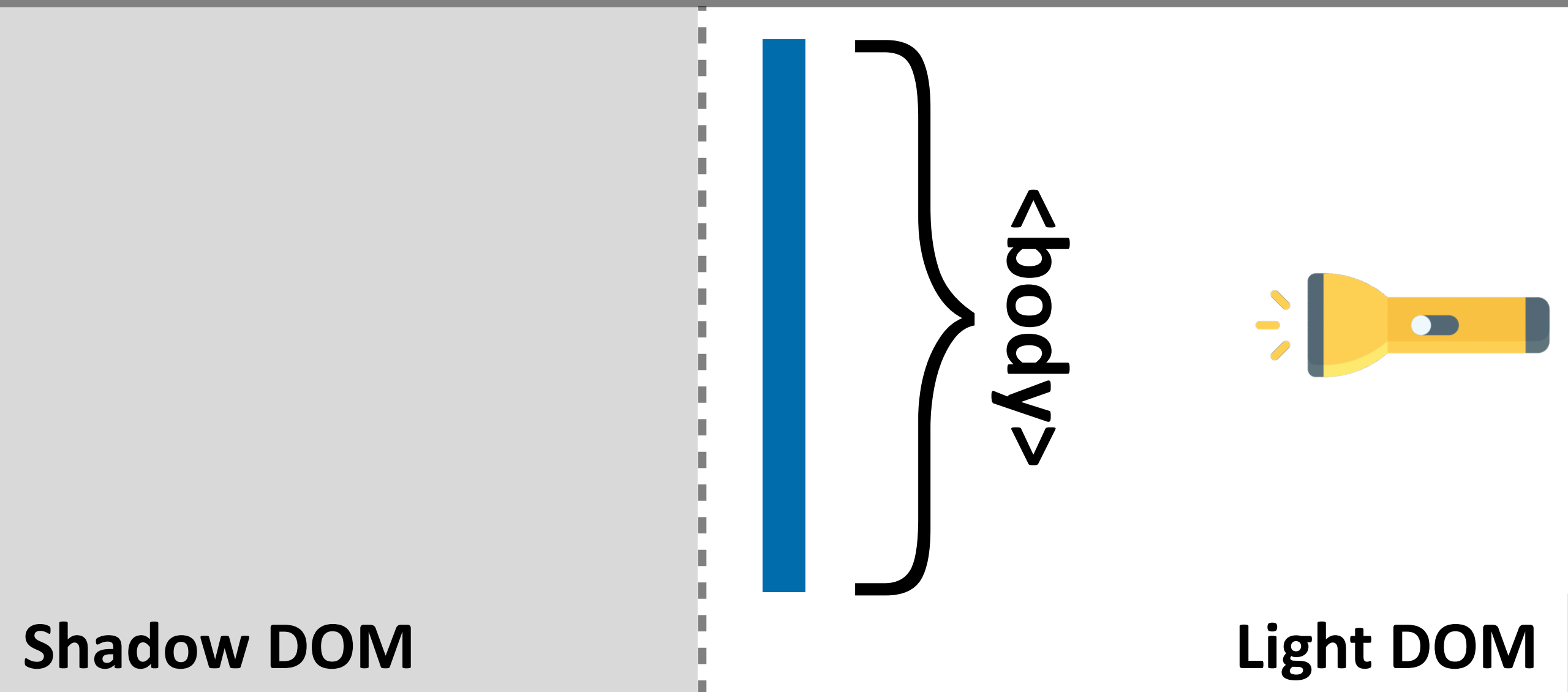
Shadow DOM + CSS

Shadow DOM

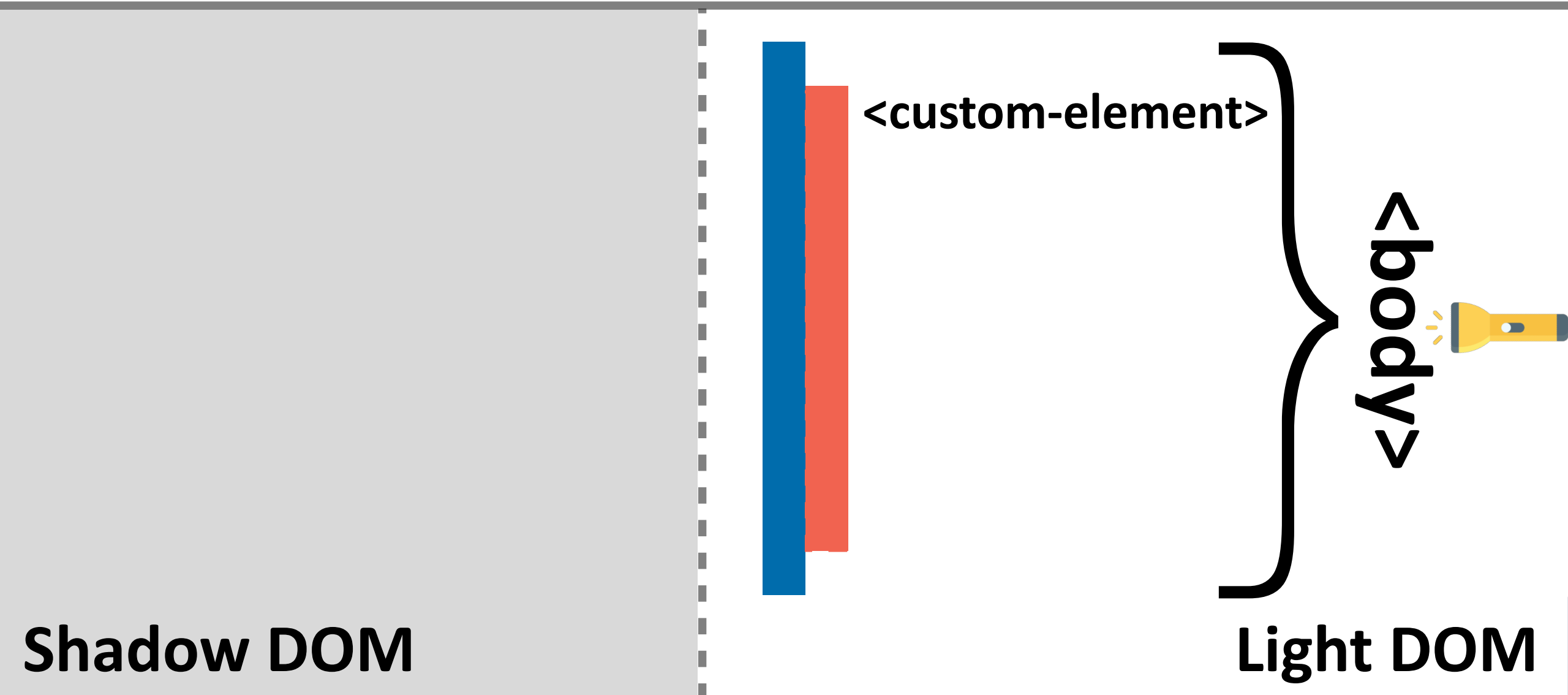
Light DOM



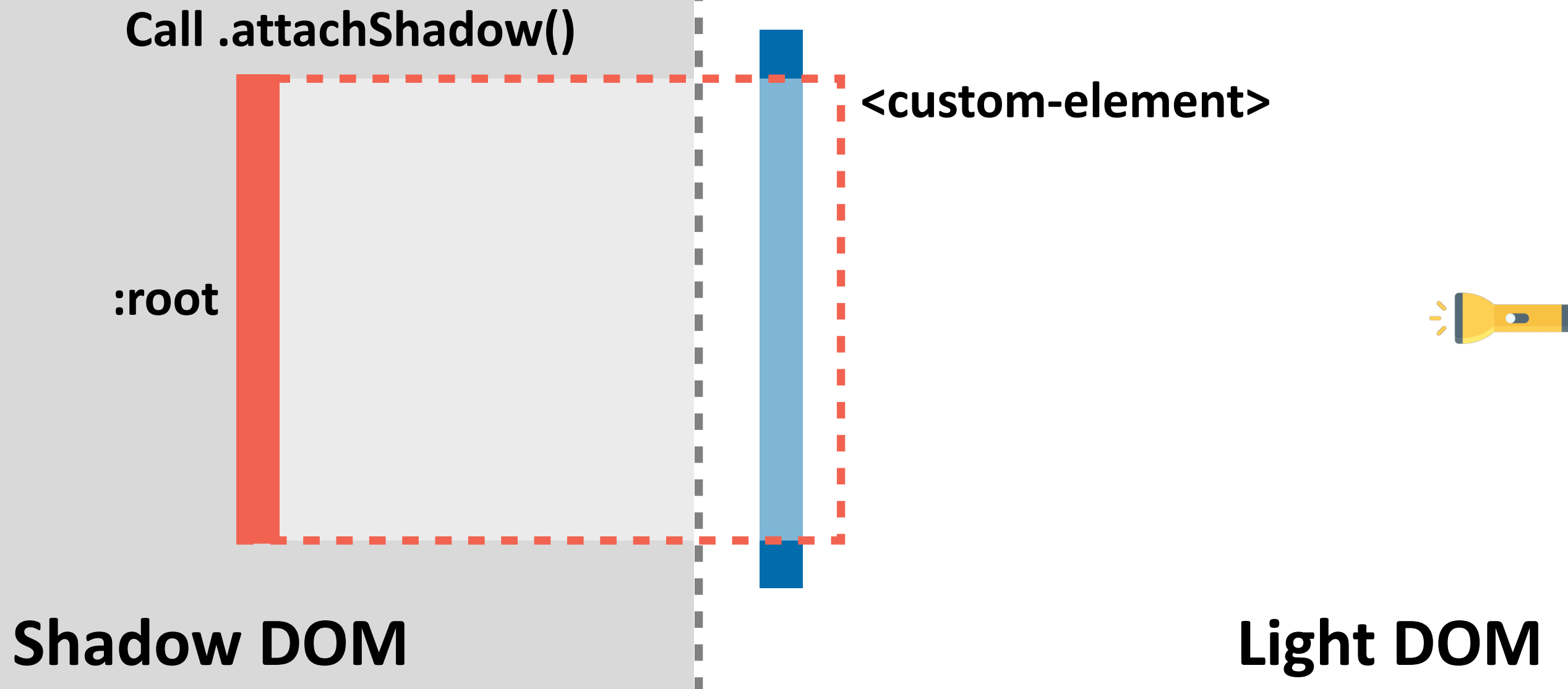
Shadow DOM + CSS



Shadow DOM + CSS



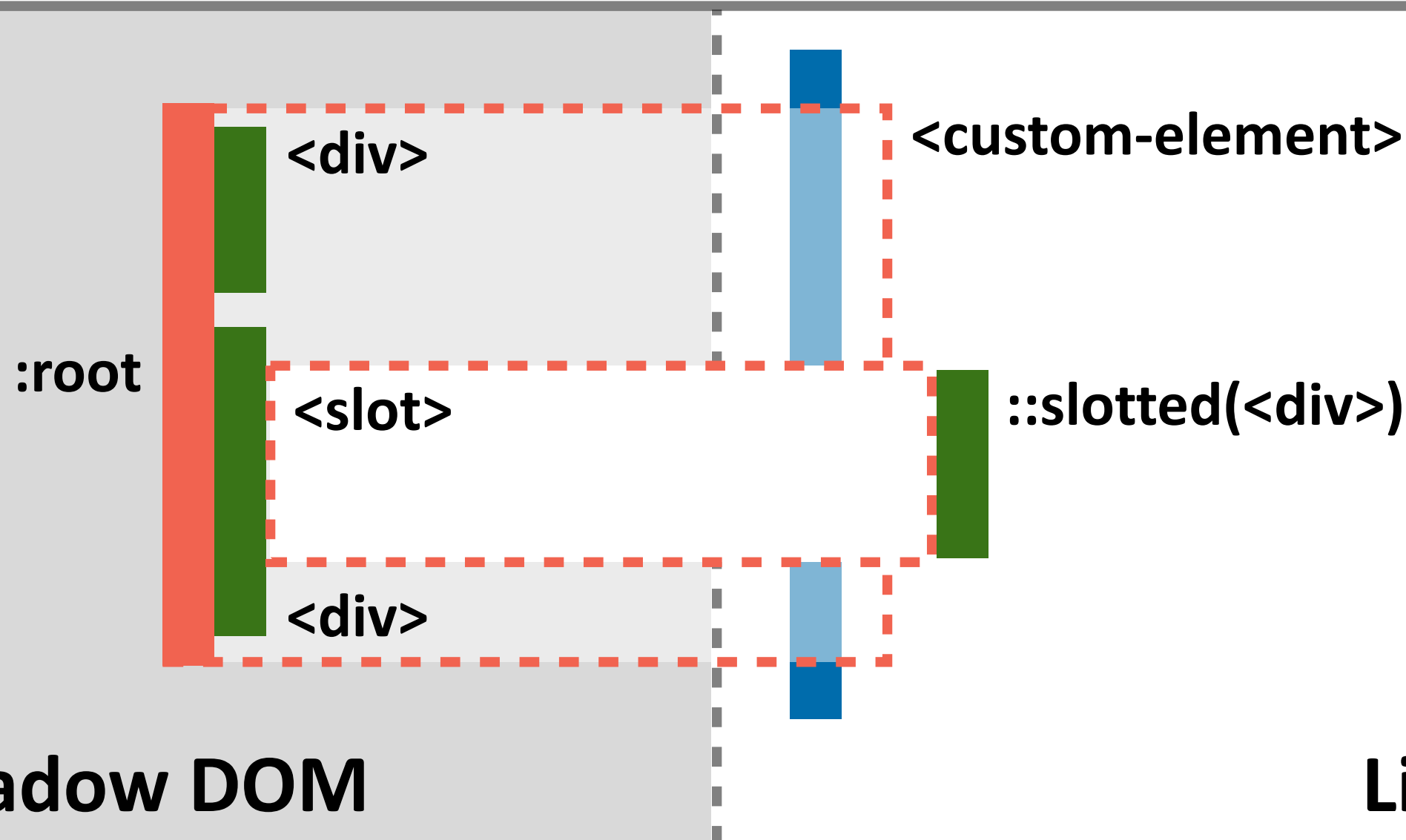
Shadow DOM + CSS



Shadow DOM + CSS



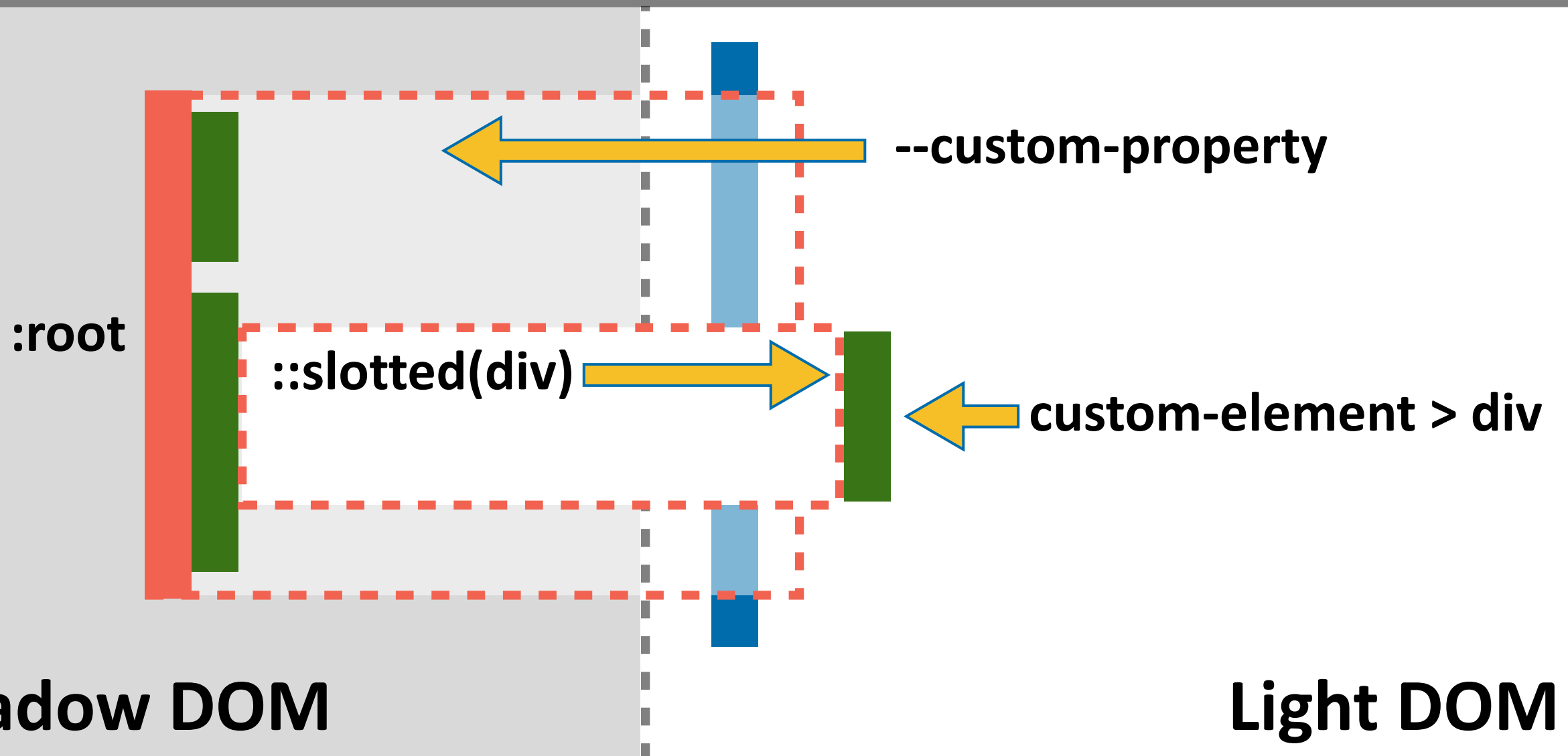
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Shadow DOM

Light DOM

Shadow DOM + CSS



Shadow DOM components

1. Custom elements
2. Templates
3. Shadow DOM



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Light DOM components

1. Custom elements
2. ~~Templates~~
3. ~~Shadow DOM~~



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Split components

Shadow DOM Components

Light DOM Components

SERVER

vanilla HTML w/
Declarative Shadow DOM

vanilla HTML w/
custom elements only

BROWSER

vanilla JavaScript
w/ attachShadow()

vanilla JavaScript
w/ customElements.**define()**

Why choose the light?

1. Less CSS drama:
Standard CSS Cascade
2. Less accessibility drama:
ARIA and the Shadow DOM



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Single Directory Web Components

using

Light DOM Web Components

or

**Declarative Shadow DOM
Components**

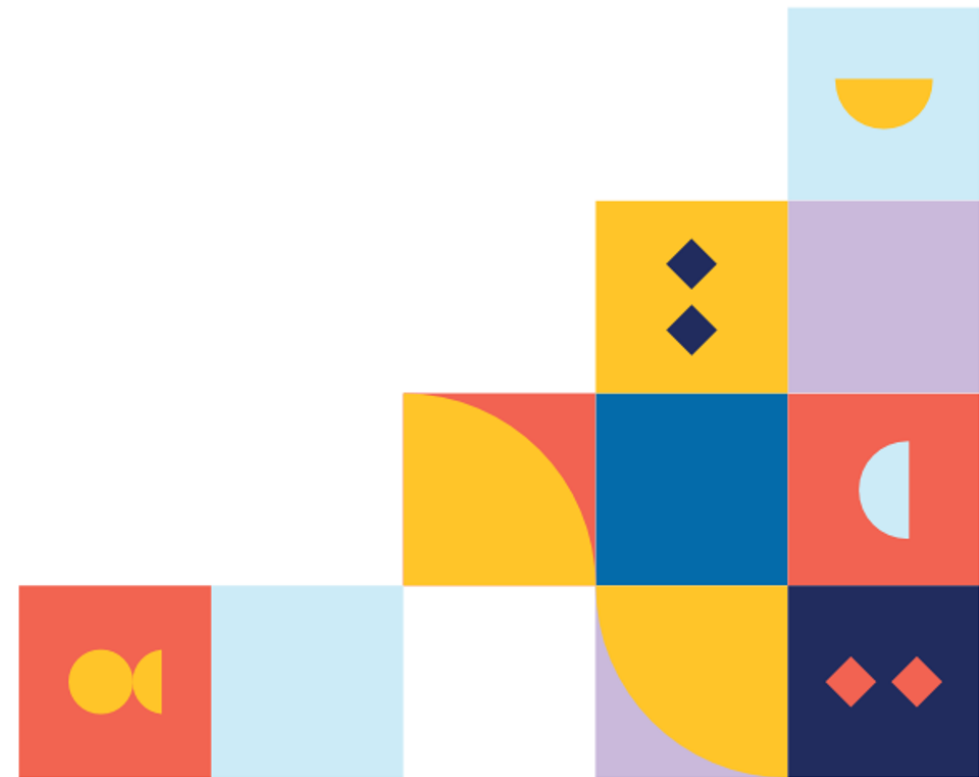


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THANK YOU!



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QUESTIONS?

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