

# Understanding Why to Use D3

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# What You'll Learn



**Compatibility**

**Flexibility**

**Performance & Scale**



# D3 Compatibility

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# D3 Browser Compatibility



IE 9+



Chrome



Firefox



Safari



Android



iOS



D3 is not a compatibility layer, so if your browser doesn't support standards, you're out of luck. Sorry!

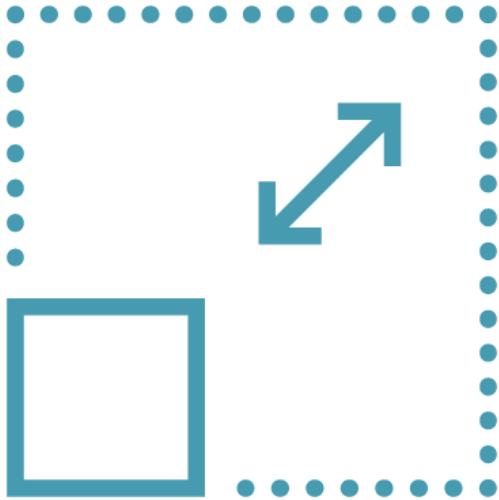


# D3 Flexibility

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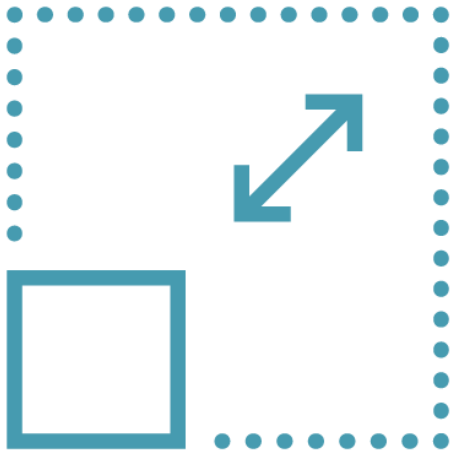
# D3 Flexibility



Responsiveness



Transitions



Responsiveness

### JS Solution:

- Event Listener to Redraw SVG

### CSS Solution:

- `viewBox` and `preserveAspectRatio`





# Transitions

## Updating in Real-Time:

- `.enter()` `.exit()`

## Animations:

- `.transition().delay().duration()...`

# D3 Performance & Scale

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# D3 Performance and Scale



Canvas



SVG



Canvas

**Pixel Manipulation**

**Better for Images**

**Loads 1 Element**





SVG

**Vector-based**

**Better for Line-based graphics**

**Loads 1 element per object**



# Comparison

**1 Canvas Element = 70ms**

**14,000 SVG Elements = 236ms**



# Where to Find More

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# Where to Find More



## Pluralsight Courses

- D3 Fundamentals
- SVG Fundamentals

## Code School

- You, Me, and SVG

## External

- [bensullins.com/d3bigpicture-m3](https://bensullins.com/d3bigpicture-m3)

