

Astro Islands

Beyond Framework Borders

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Hello! I'm Joe 🙌

Senior Developer at KFC 🍗



What's coming up

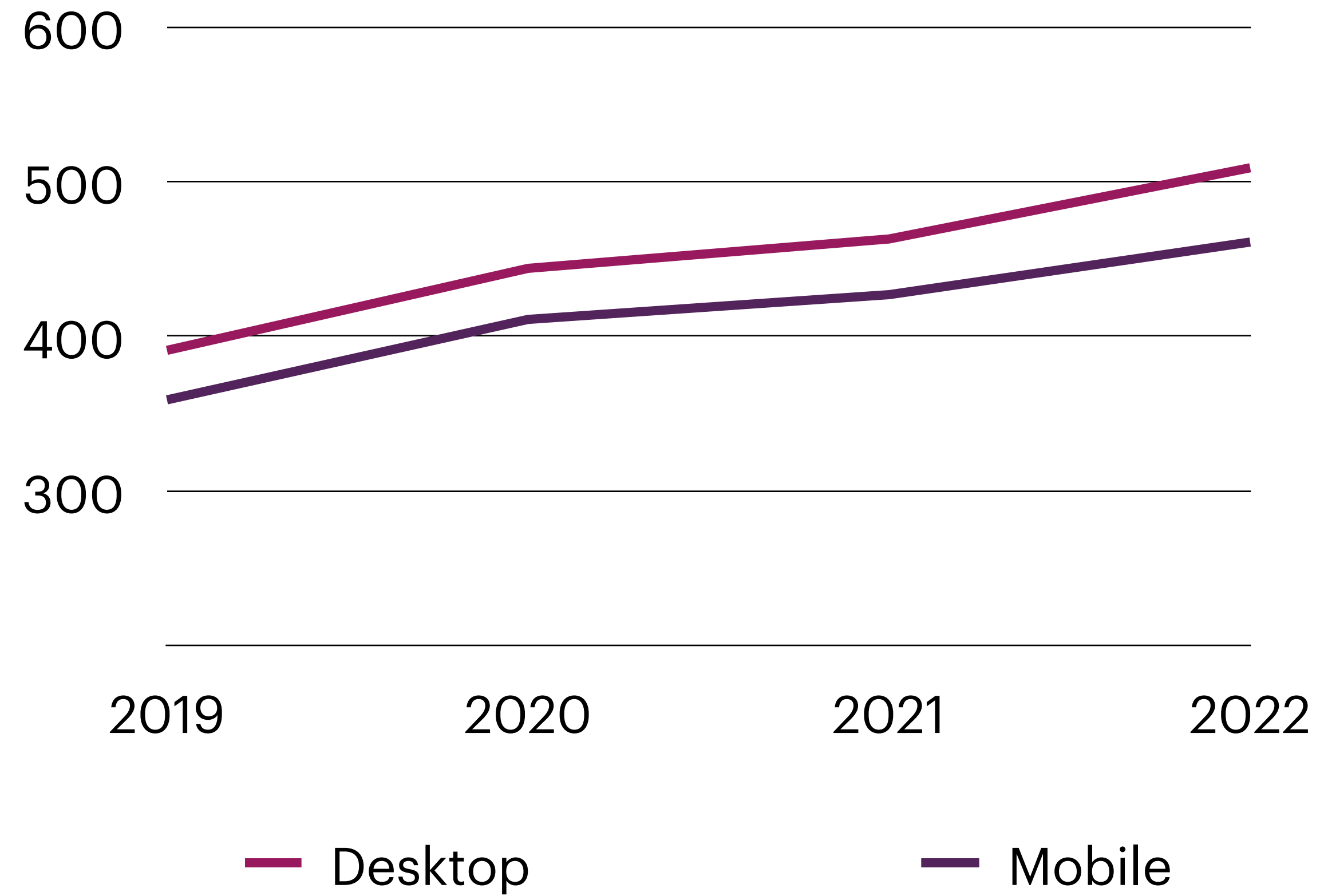
- 🏝️ What are Islands?
- 🚀 What is Astro?
- 😬 Demo
- 🙋 Caveats and follow up
- 🙋 Q&A





**The amount of JavaScript loaded per website
has been increasing steadily every year**

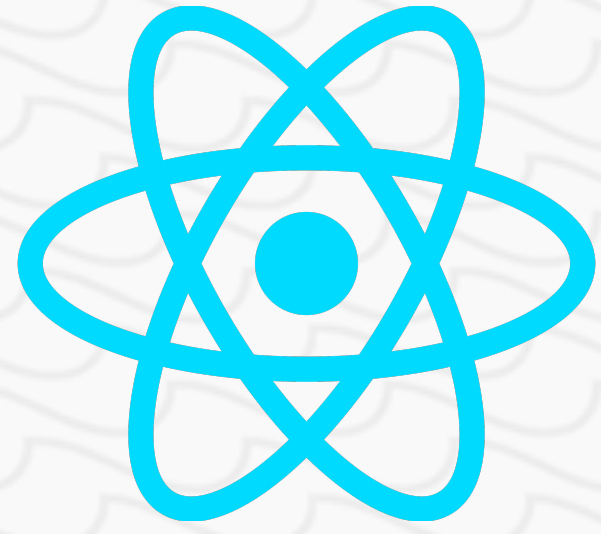
Mean amount of JS bytes distributed on webpages



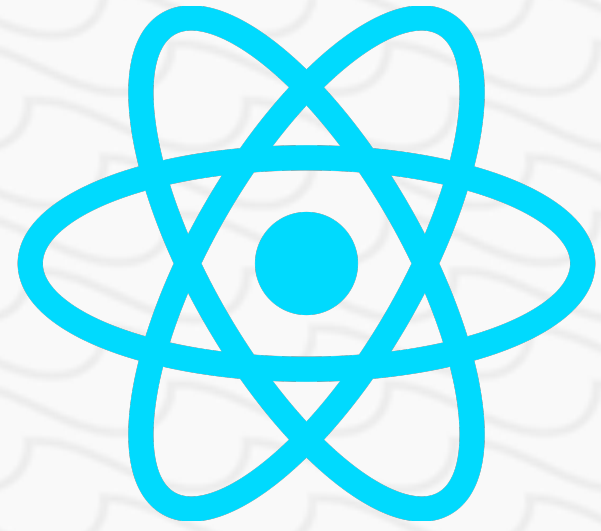
Figures provided by annual Web Almanac Report

Why is this a bad thing?

- Increased page loading times for downloading and parsing
- Blocks rendering of other page content
- Higher resource usage



NEXT.JS



CSR

NEXT.JS

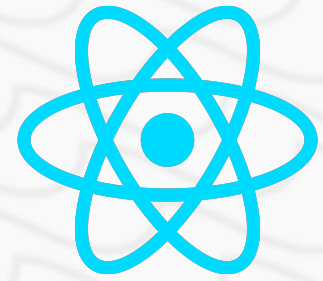
CSR

SSG

SSR

ISR

Client-side rendering



Bad

(except in a few cases)

NEXT.JS

Server-side rendering

1

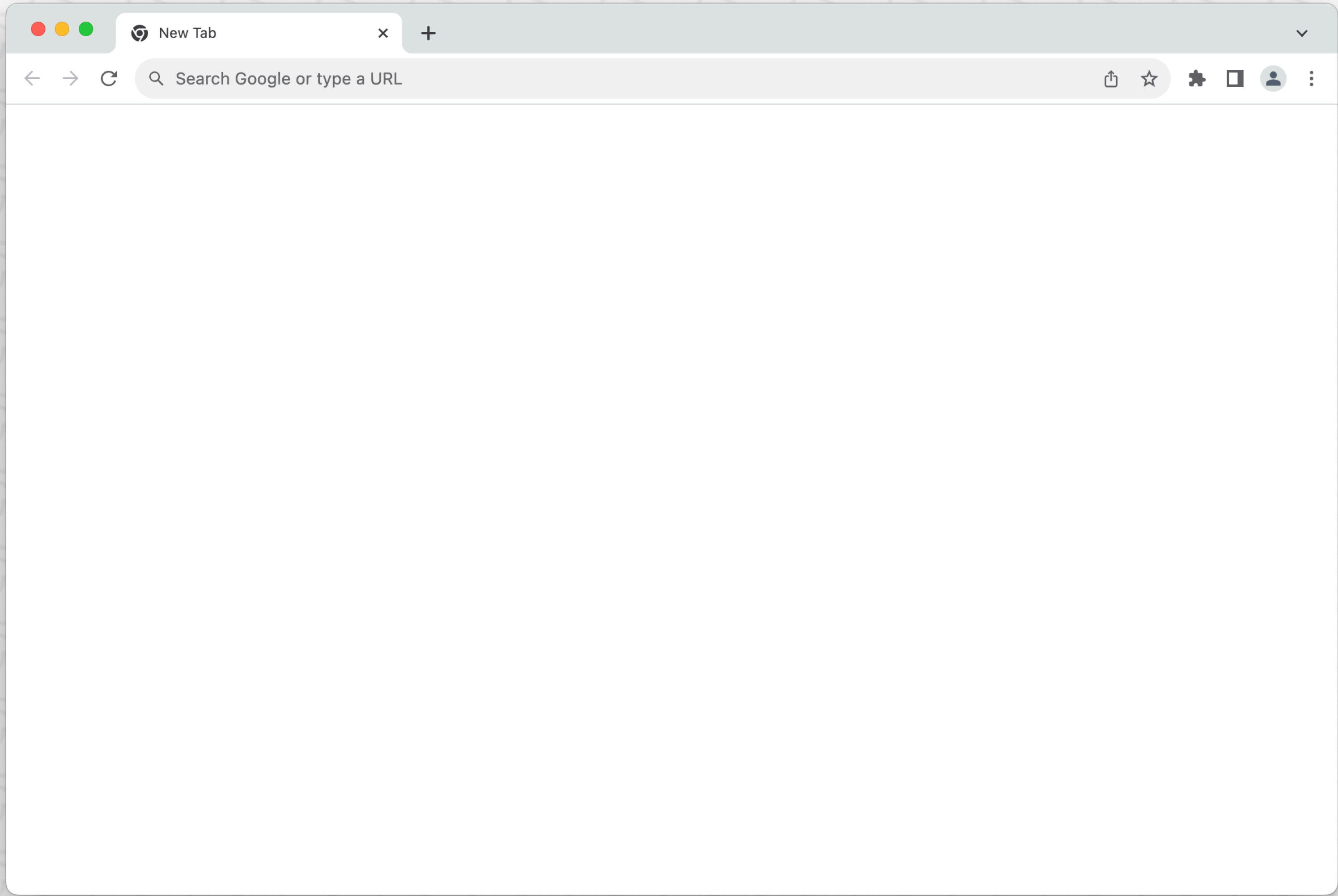
Page renders
pre-built HTML

2

Browser downloads
JavaScript and
executes React

3

Page is "hydrated" and
now interactive





JavaScript \neq "bad"

We as developers need to write and distribute JavaScript responsibly





**A principle of
only shipping JavaScript for specific
components of a webpage**



HEARTS DRAW IN WOMEN'S SCOTTISH CUP

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LADIES DAY IN THE GORGIE

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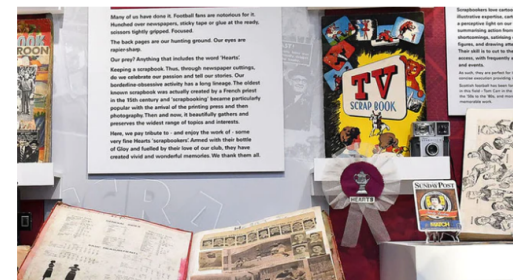
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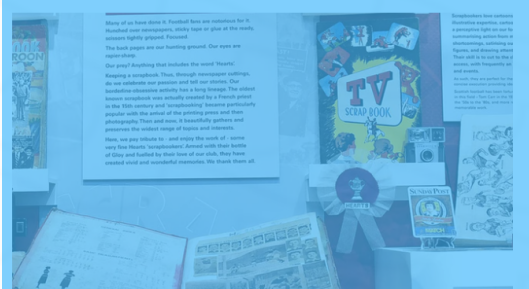
LADIES DAY IN THE GORGIE
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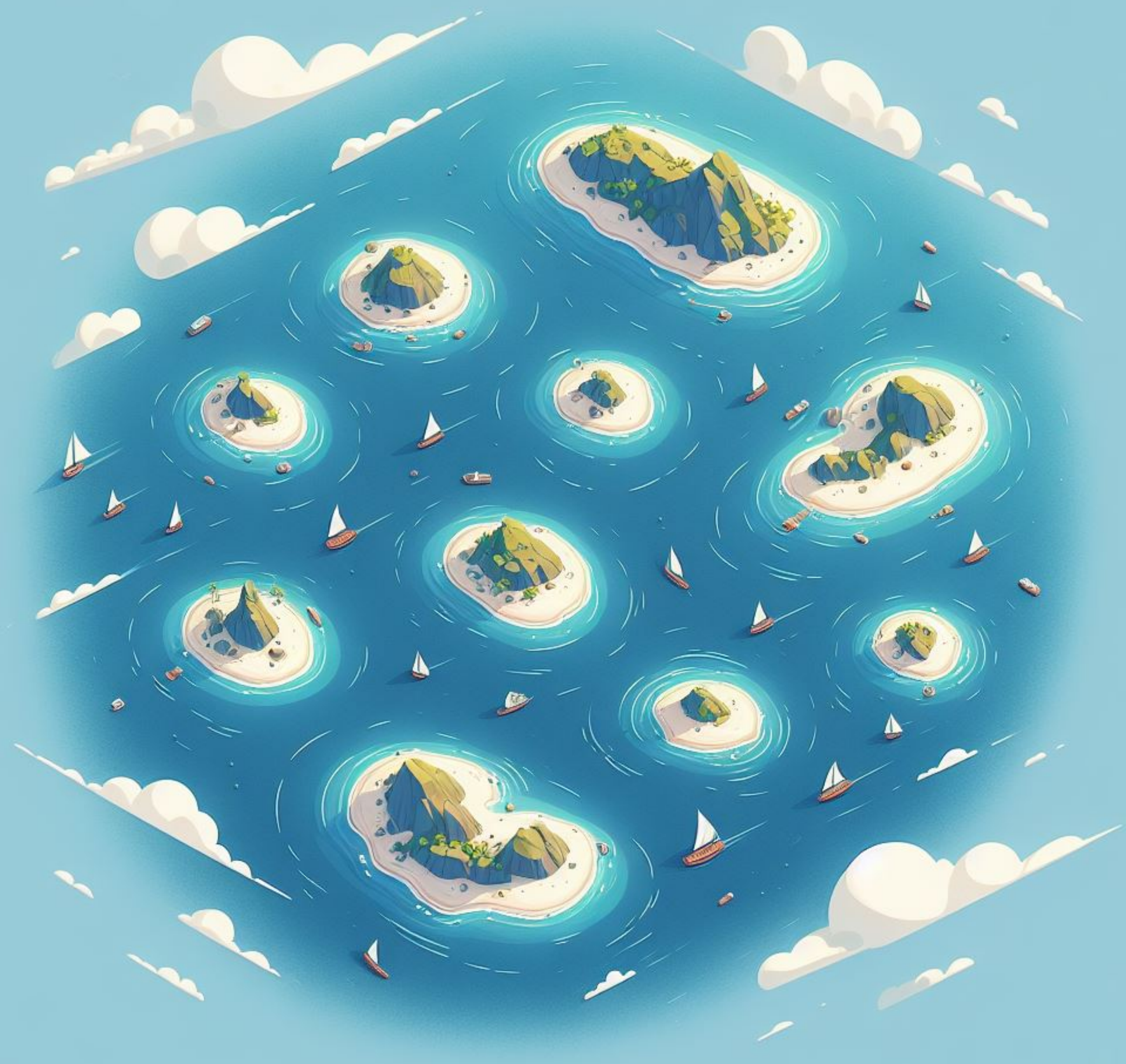
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**Islands do not depend on each other, but
they can share state**

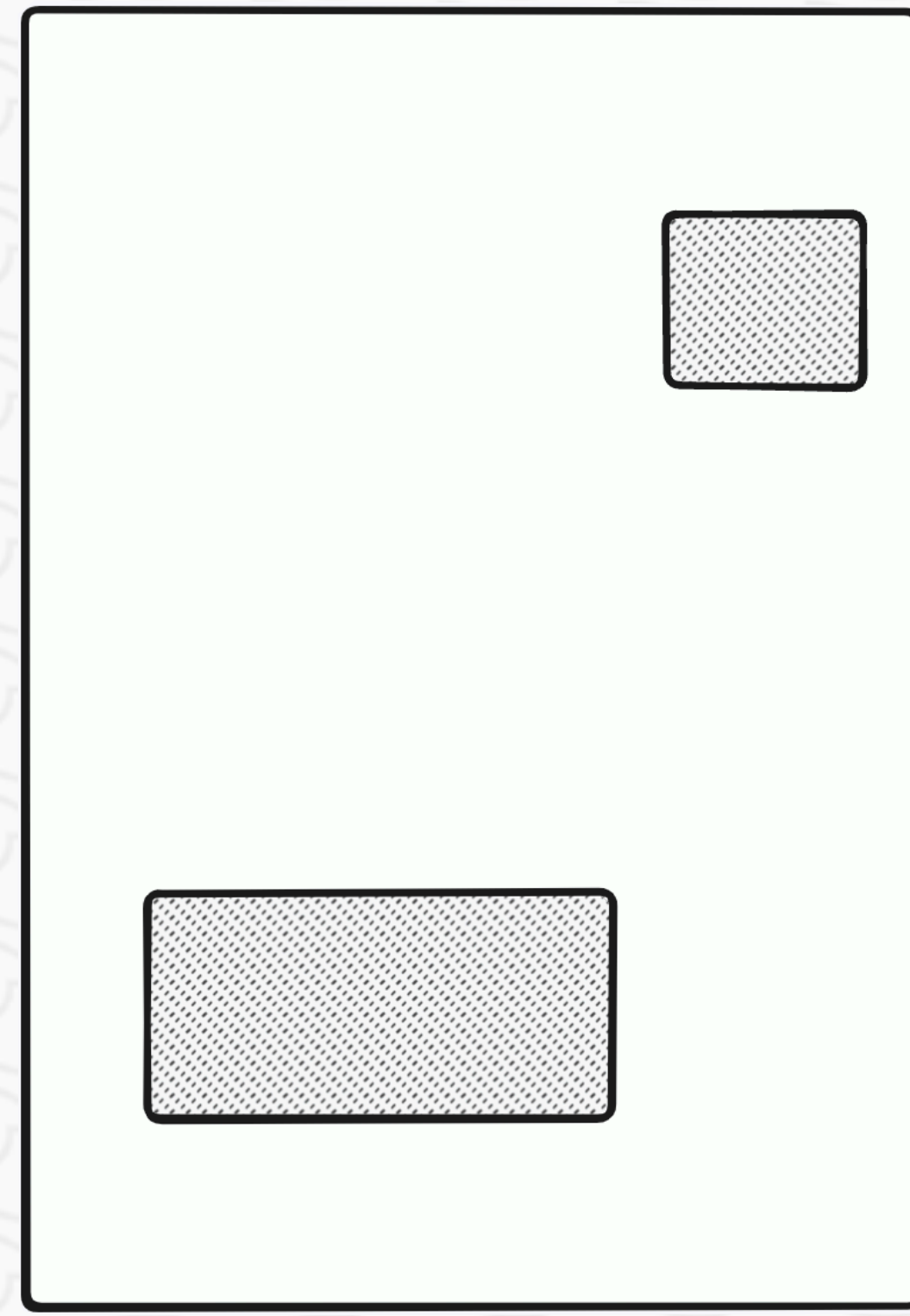
Custom Events are cool too #UseThePlatform

**Only the islands are hydrated, rather
than the whole page**



Hydrate the whole app

(NEXT.js)

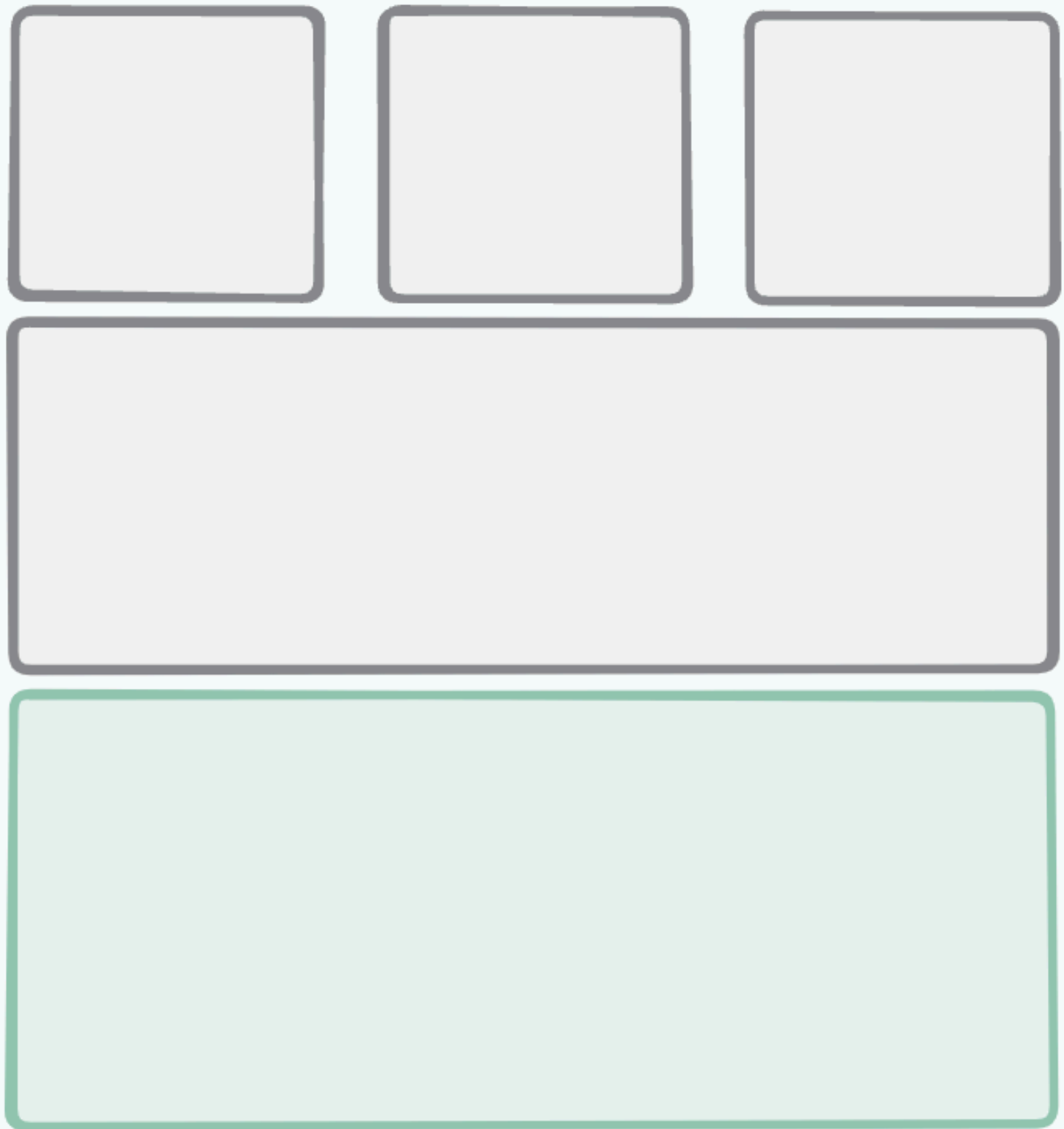
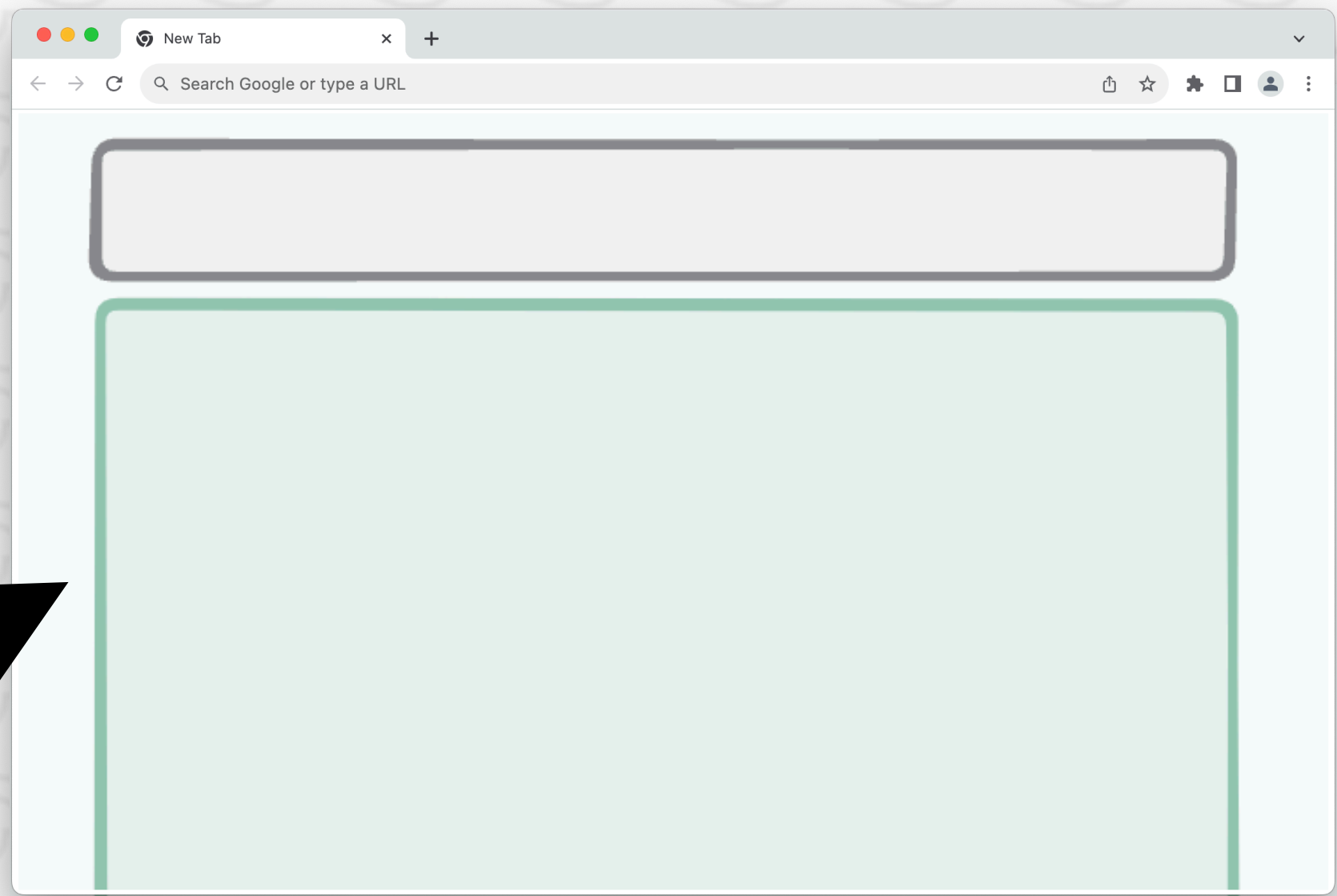


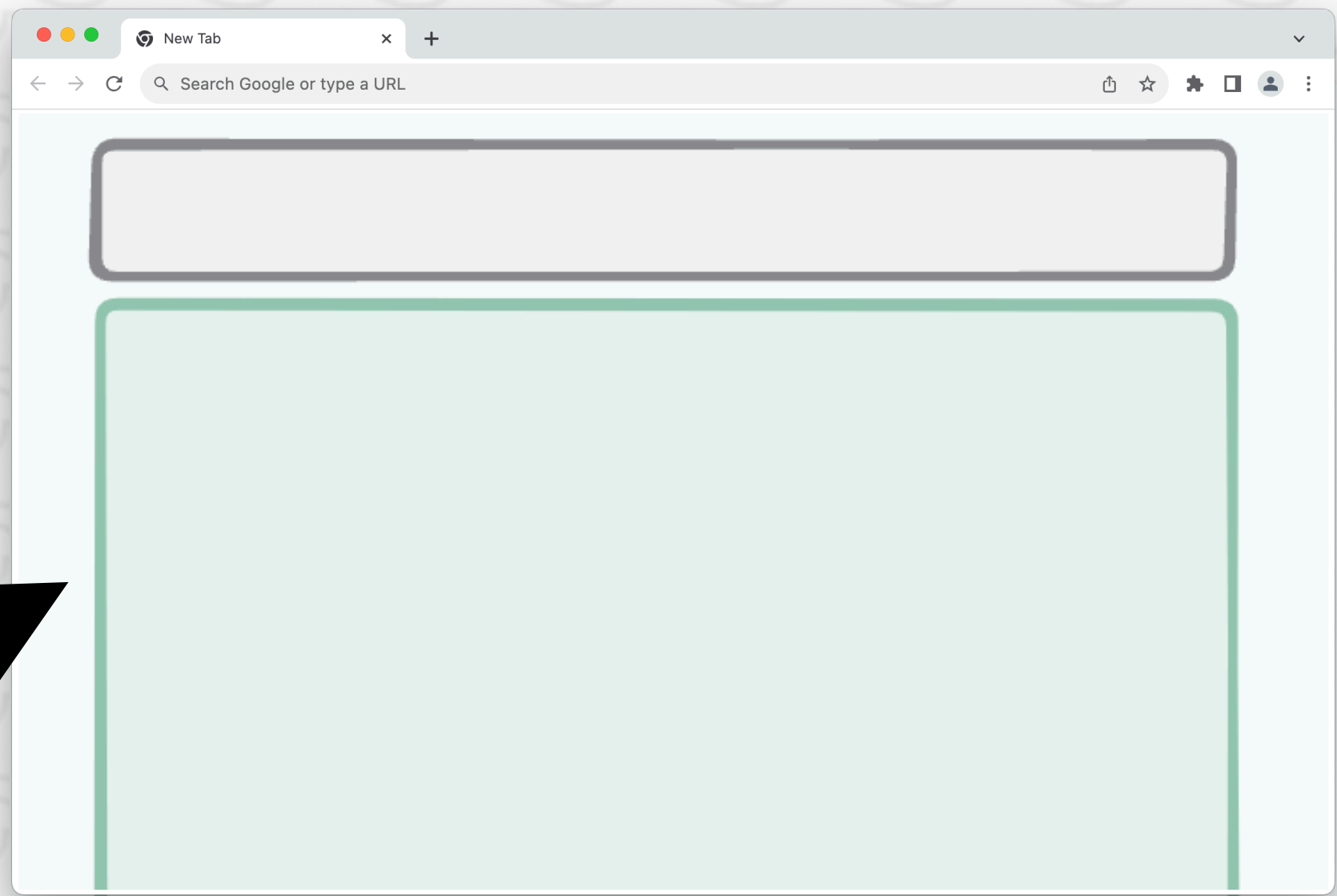
Hydrate bits as needed

(🌴)

This flexibility also means

You can load islands dynamically
according to requirements





**Load this island
when the page loads**



**Load this island
when we scroll here**



Cool 👍

How can I use islands?

Time to introduce Astro 

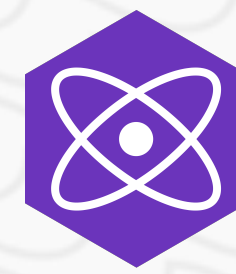
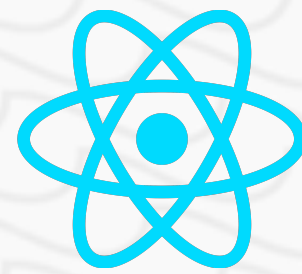
What is Astro? 🚀

- A web framework for creating content-rich websites
- Performance at its core
- Support for your favourite styling strategies
- Huge focus on developer experience

Astro is server-first

Astro ships zero JS by default

Use different UI frameworks at
the same time



**Astro allows you to hydrate
islands when needed
using “client directives”**

```
<Carousel />
```

```
<Carousel client:load />
```

```
<Carousel client:idle />
```

```
<Carousel client:visible />
```

```
<Carousel client:media="(min-width: 20em)" />
```

```
<Carousel />
```

```
<Carousel client:load />
```

```
<Carousel client:idle />
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<Carousel client:visible />
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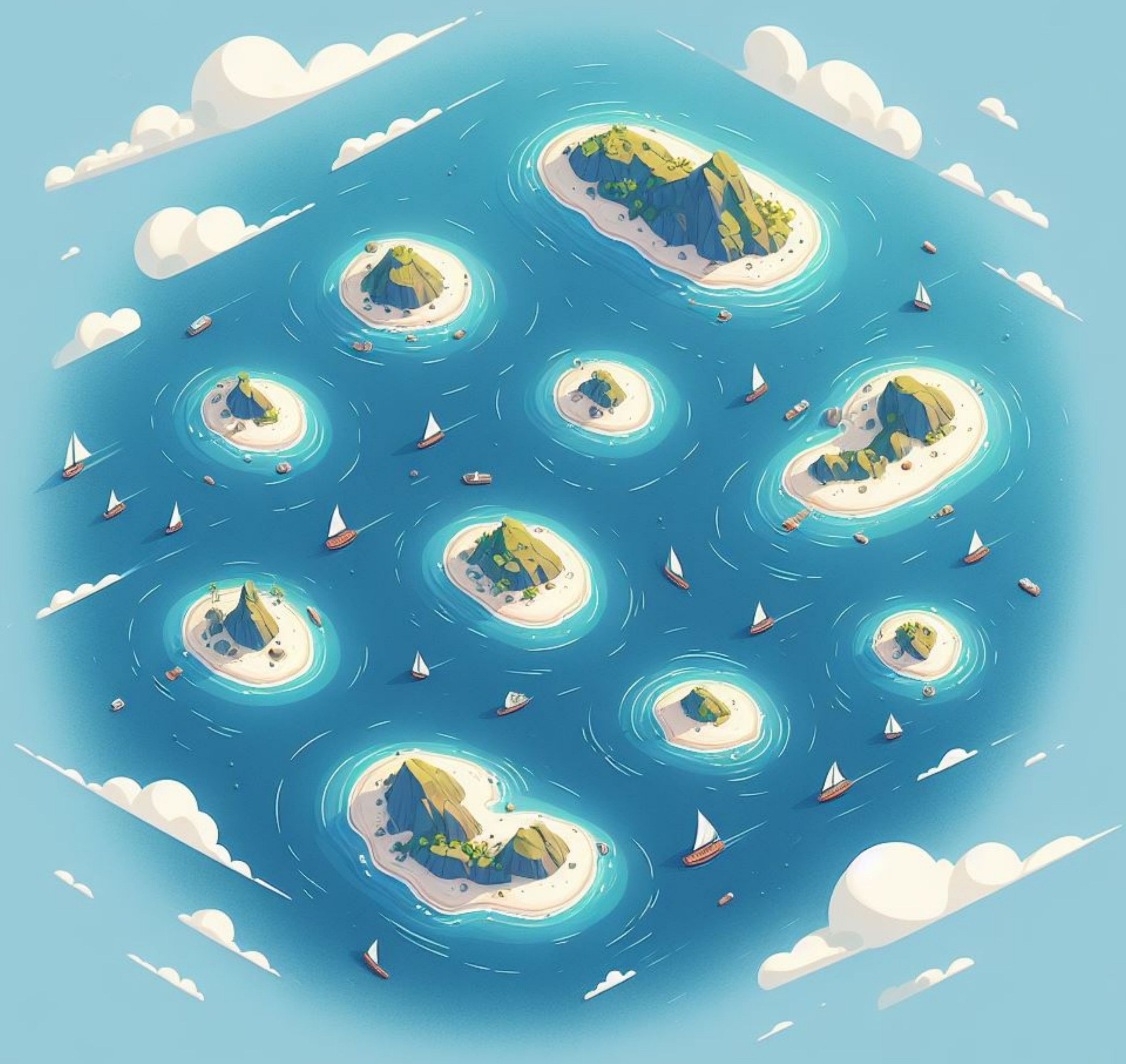
```
<Carousel client:visible />
```

```
<Carousel client:media="(min-width: 20em)" />
```


Demo 😬

In sum

JavaScript \neq "bad"





FRESH



What about React Server Components?





Jack Herrington

@jherr

Moving your code into the app directory and sprinkling it with "use client" doesn't make it an islands app. Have a look at the output HTML, it's bloated with a JSON copy of the ENTIRE DOM TREE, as well as the props for all the clients individually. And that's on top of the JS.

4:09 PM · February 4, 2023



Thank you!

Questions welcome!

But not too many

please

Resources

- [patterns.dev](#): Documentation on rendering patterns like CSR and SSR
- [Astro's own explanation of islands](#)
- [Deno's great introduction to islands](#)
- [My demo on GitHub](#)
- [Web Almanac's 2022 state of the web report](#)