

DON'T  
STAY  
HYDRATED



# A QUICK HISTORY OF WEB RENDERING

# Good ol' plain HTML

Good ol' plain HTML & iframes

# Good ol' plain HTML & iframes



# Introduction of Javascript & jQuery

# Introduction of Javascript & jQuery



Server returns HTML &  
browser renders it

# Introduction of Javascript & jQuery



Server returns HTML &  
browser renders it

Browser executes JS  
targeting specific  
elements

# Single page applications

# Single page applications



Server returns empty  
“container”

# Single page applications



Server returns empty  
“container”

Browser loads JS

# Single page applications



Server returns empty  
“container”

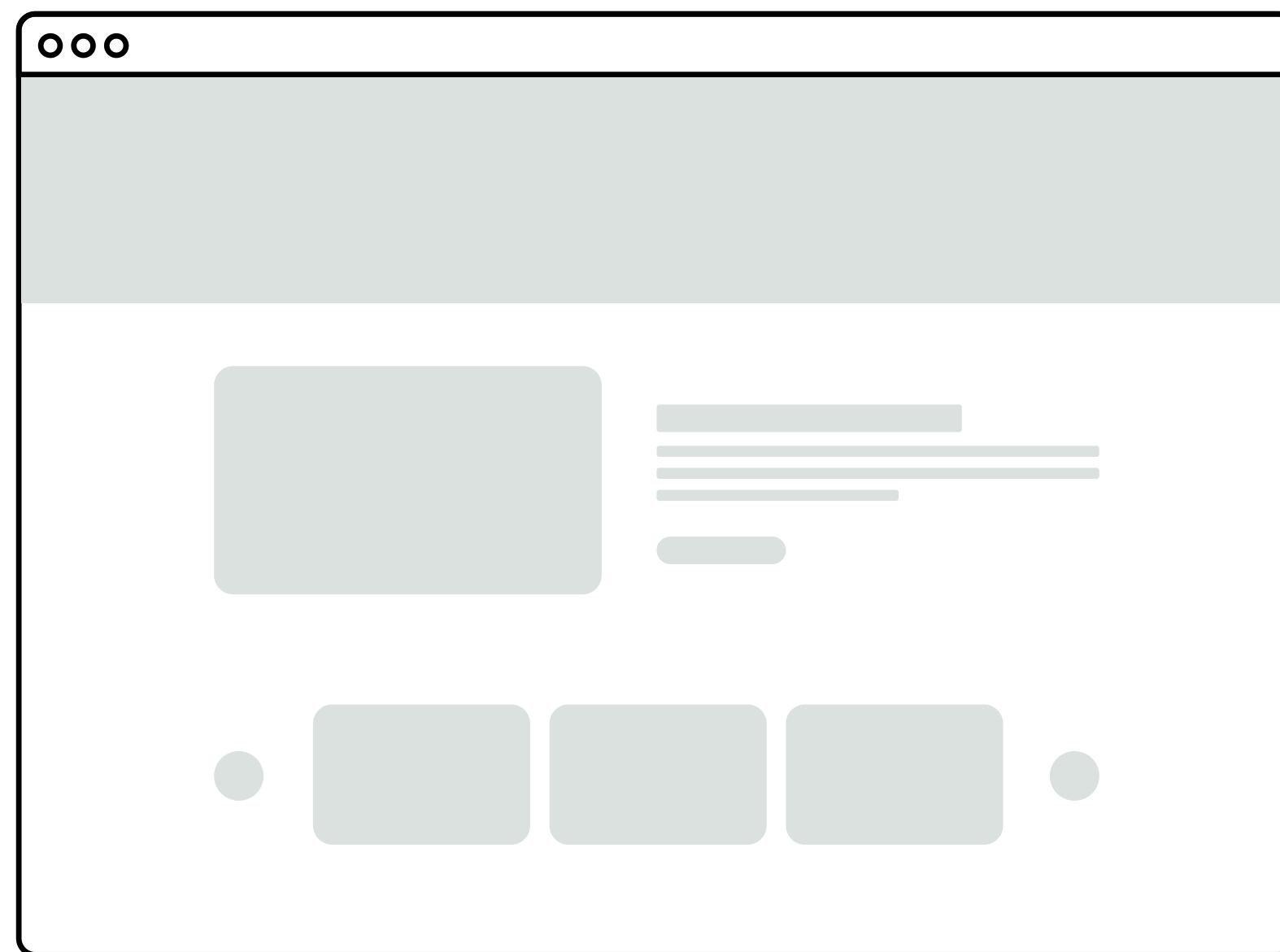
Browser loads JS

Javascript creates and  
injects DOM elements

GOING BACK TO  
THE SERVER

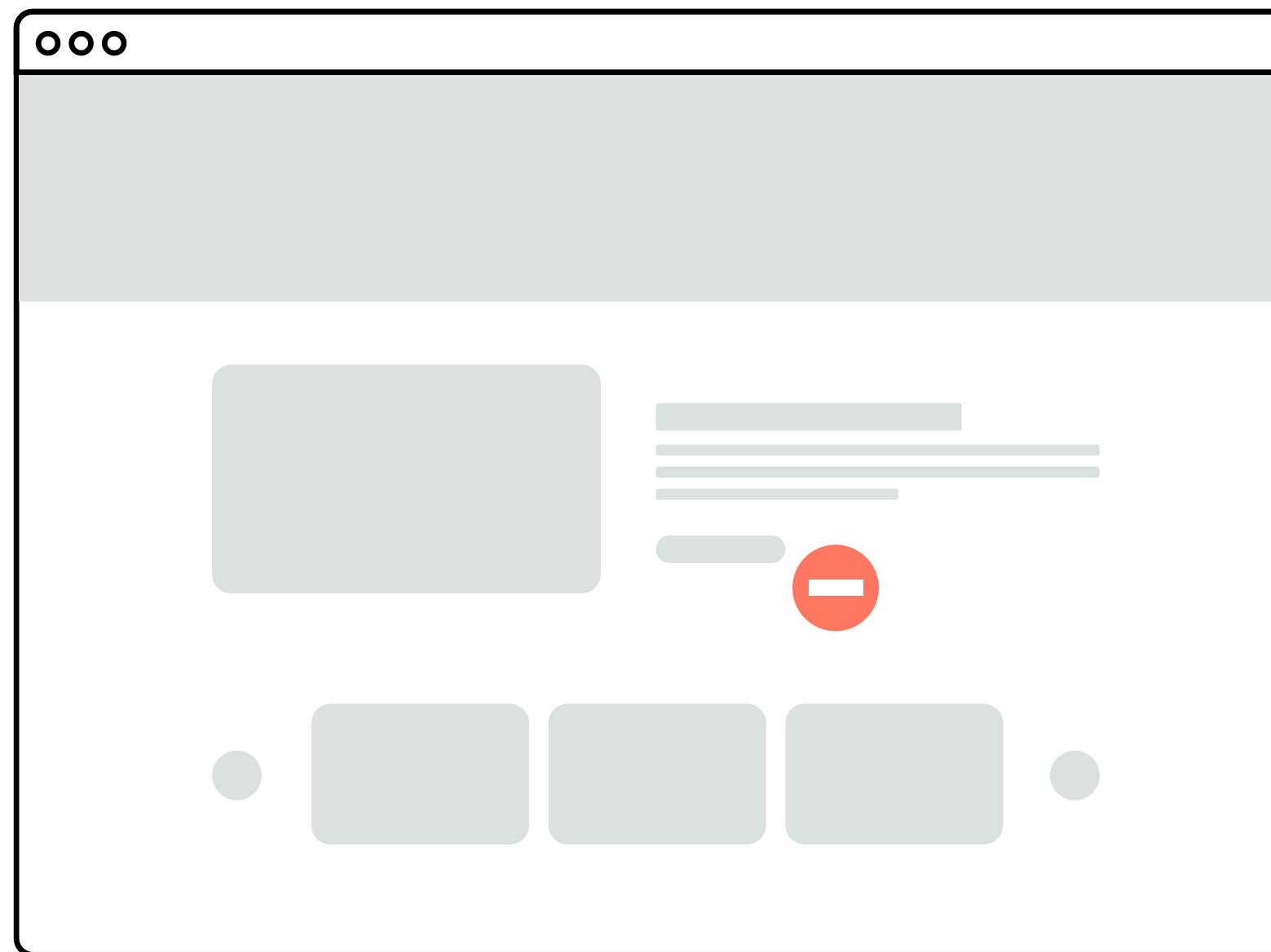
**SSG and SSR e.g. with Gatsby, NextJS, etc**

# SSG and SSR e.g. with Gatsby, NextJS, etc



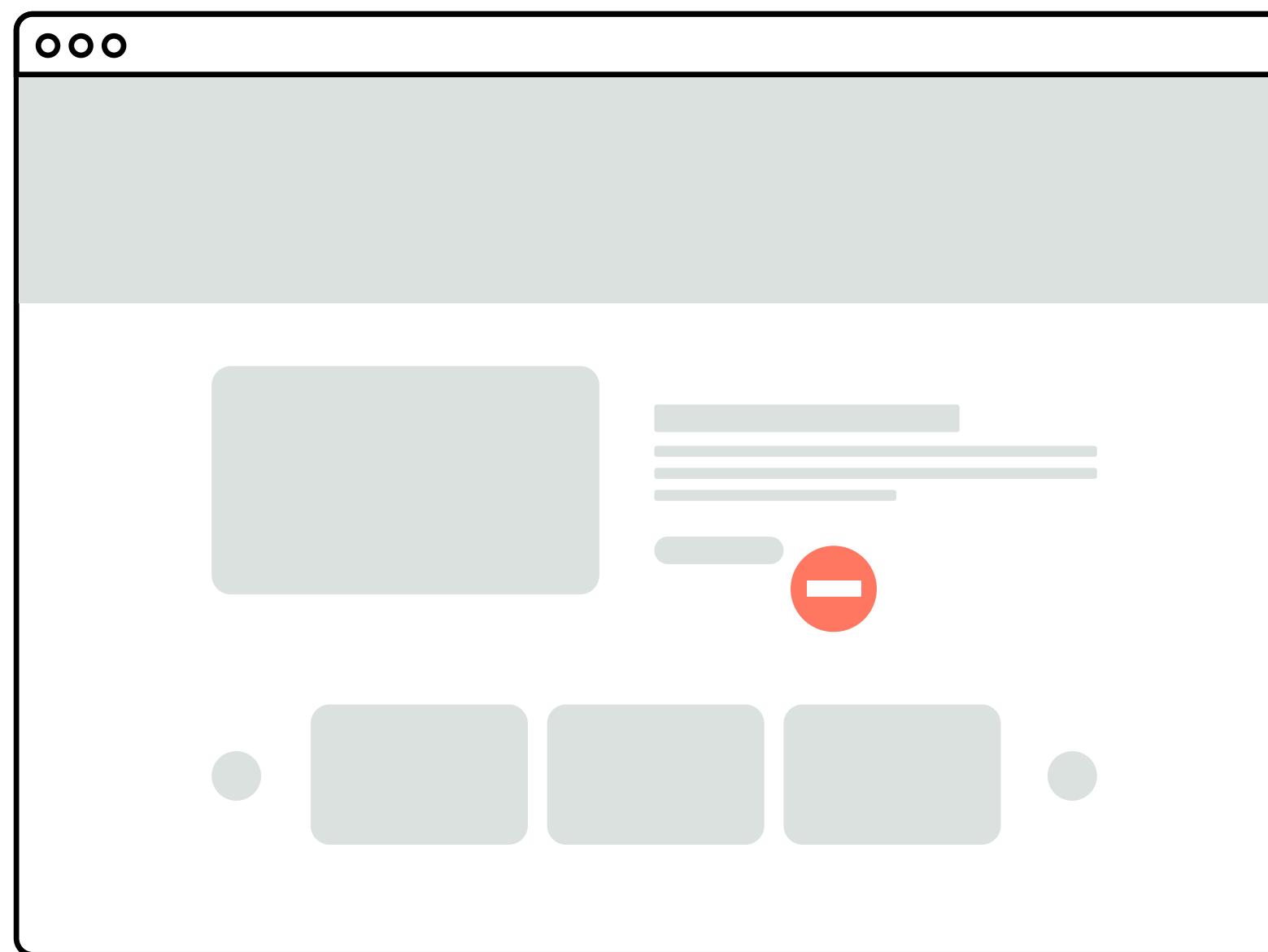
Server returns HTML &  
browser renders it

# SSG and SSR e.g. with Gatsby, NextJS, etc



Server returns HTML &  
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# SSG and SSR e.g. with Gatsby, NextJS, etc



Server returns HTML & browser renders it

Browser loads JS

# SSG and SSR e.g. with Gatsby, NextJS, etc



Server returns HTML & browser renders it

Browser loads JS

Javascript gets executed and creates virtual copy of the DOM to swap out content

THE SOLUTIONS -  
PARTIAL & NO  
HYDRATION

# React Server Components

# React Server Components



Server returns HTML &  
browser renders it

# React Server Components



Server returns HTML &  
browser renders it

Browser executes JS  
targeting specific  
elements

# React Server Components = *partial hydration*



Server returns HTML &  
browser renders it

Browser executes JS  
targeting specific  
elements

# Astro's concept of islands = **partial hydration**



Server returns HTML & browser renders it

Browser executes JS targeting specific elements

**Qwik = “zero” hydration**

# Qwik = “zero” hydration



Server returns HTML w/  
serialised state &  
browser renders it

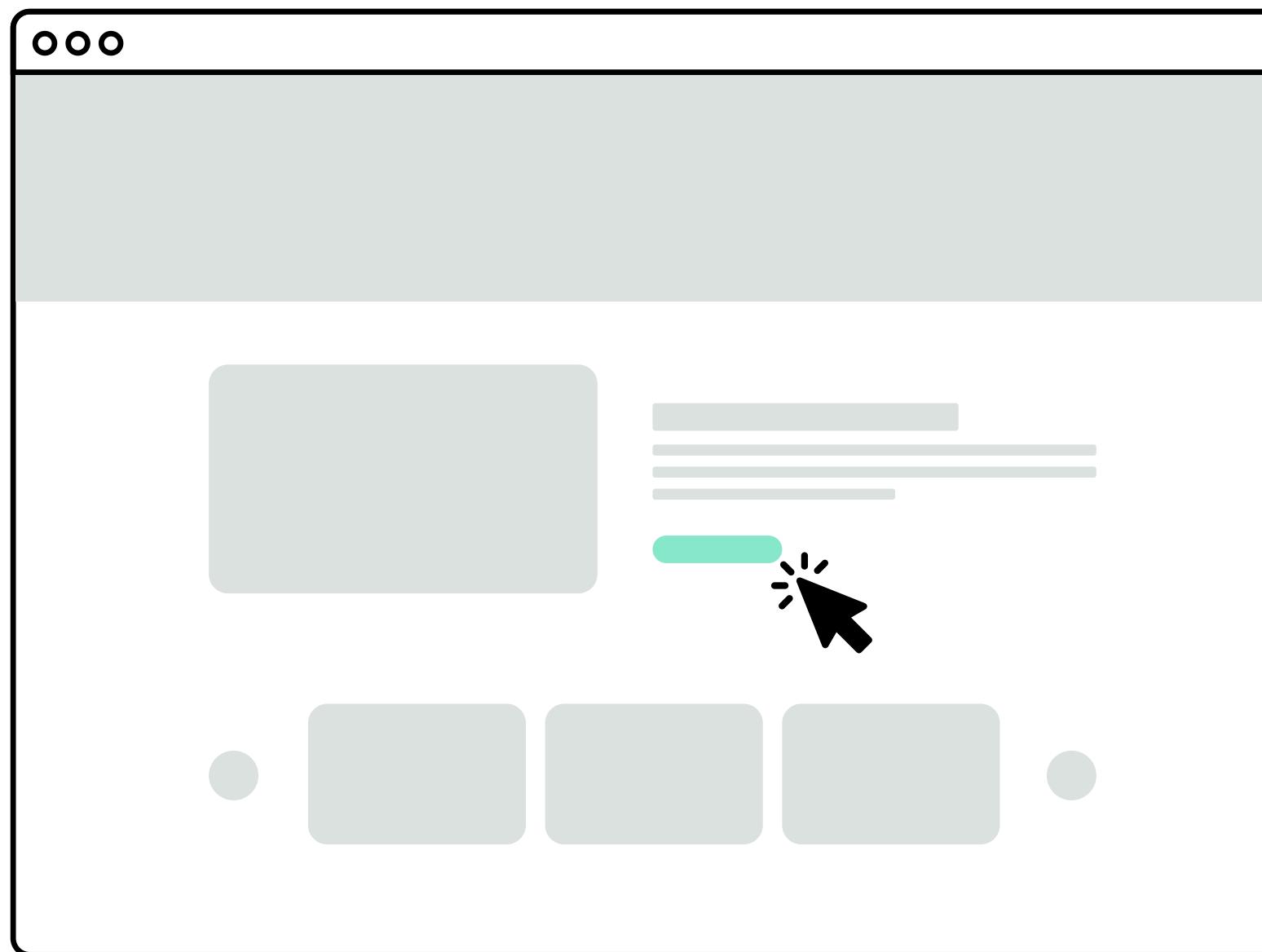
# Qwik = “zero” hydration



Server returns HTML w/  
serialised state &  
browser renders it

Browser loads tiny  
framework JS

# Qwik = “zero” hydration



Server returns HTML w/  
serialised state &  
browser renders it

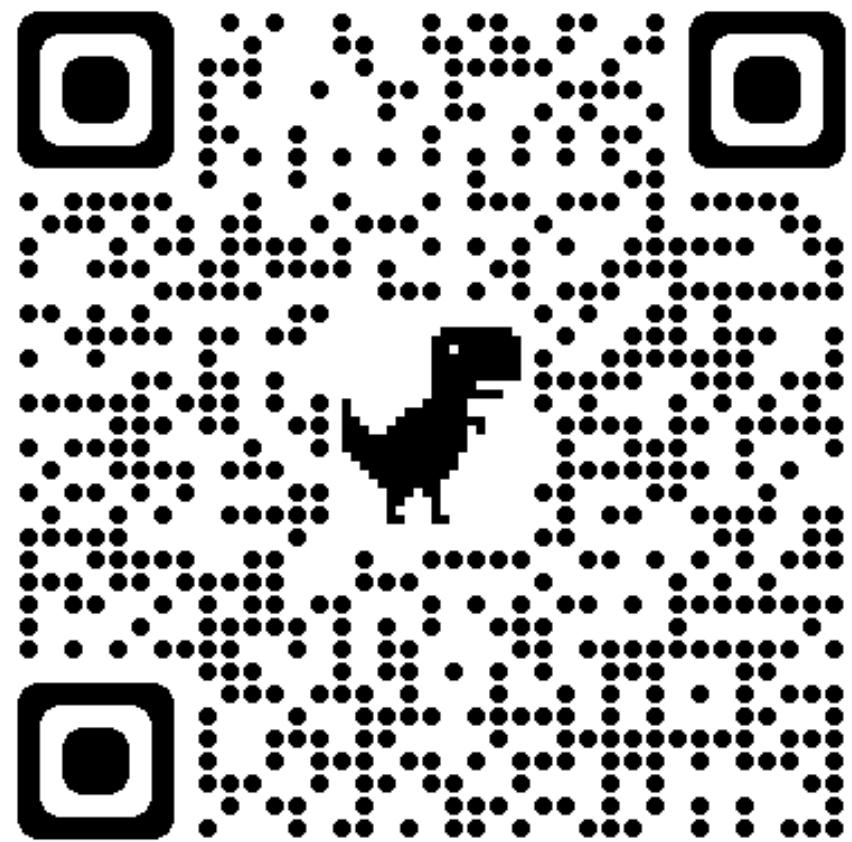
Browser loads tiny  
framework JS

Other JS is only loaded  
lazily or on demand

LET'S LOOK AT  
REAL CODE

[HTTPS://GITHUB.COM/JULIANBURR/TALK-DONT-STAY-HYDRATED](https://github.com/julianburr/talk-dont-stay-hydrated)

# THANKS



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[HTTPS://WWW.JULIANBURR.DE/  
DONT-STAY-HYDRATED-BRISJS-2024-SLIDES.PDF](https://www.julianburr.de/dont-stay-hydrated-brisjs-2024-slides.pdf)