



**Deliver
instant apps
at scale**

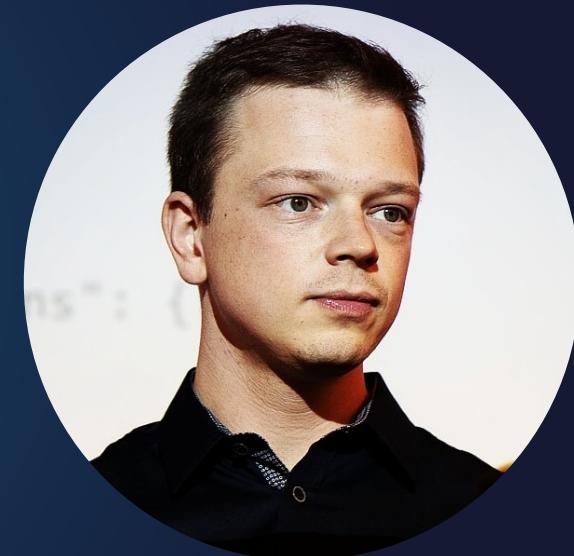
New perspectives
open up
new paths.





 @GregOnNet

Find me at the conference and say hi!



Gregor Woiwode, CTO

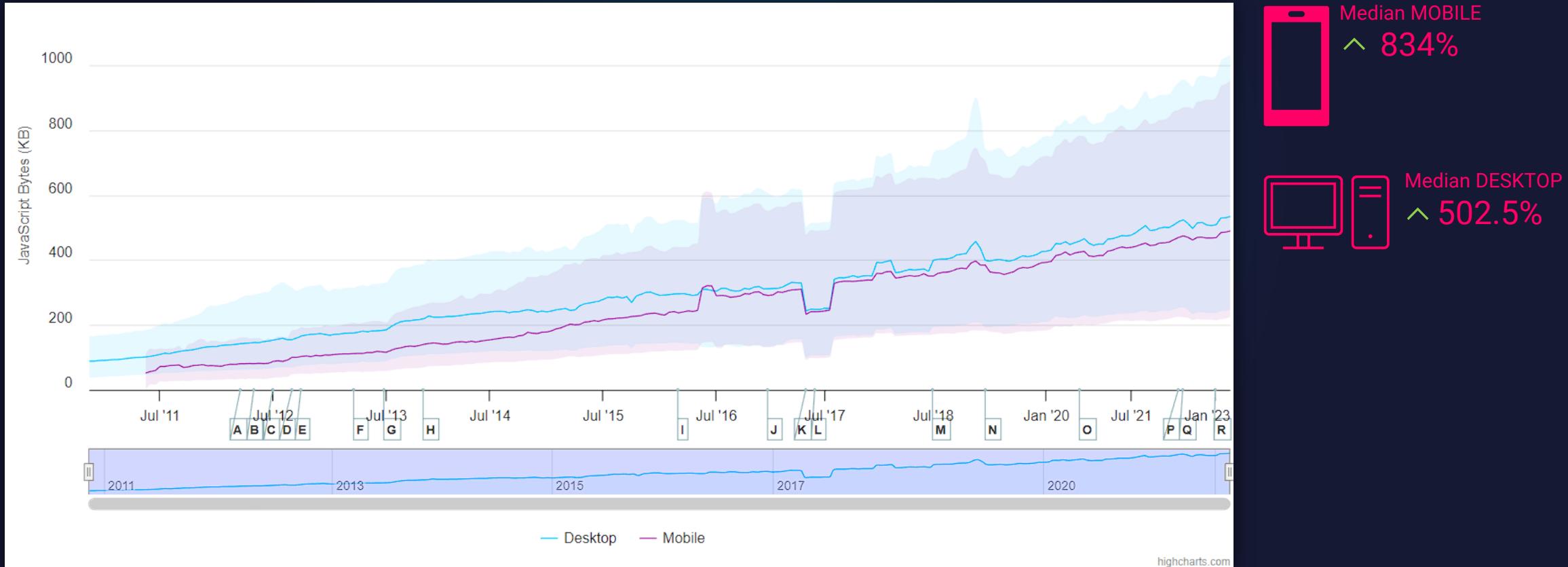


Part I

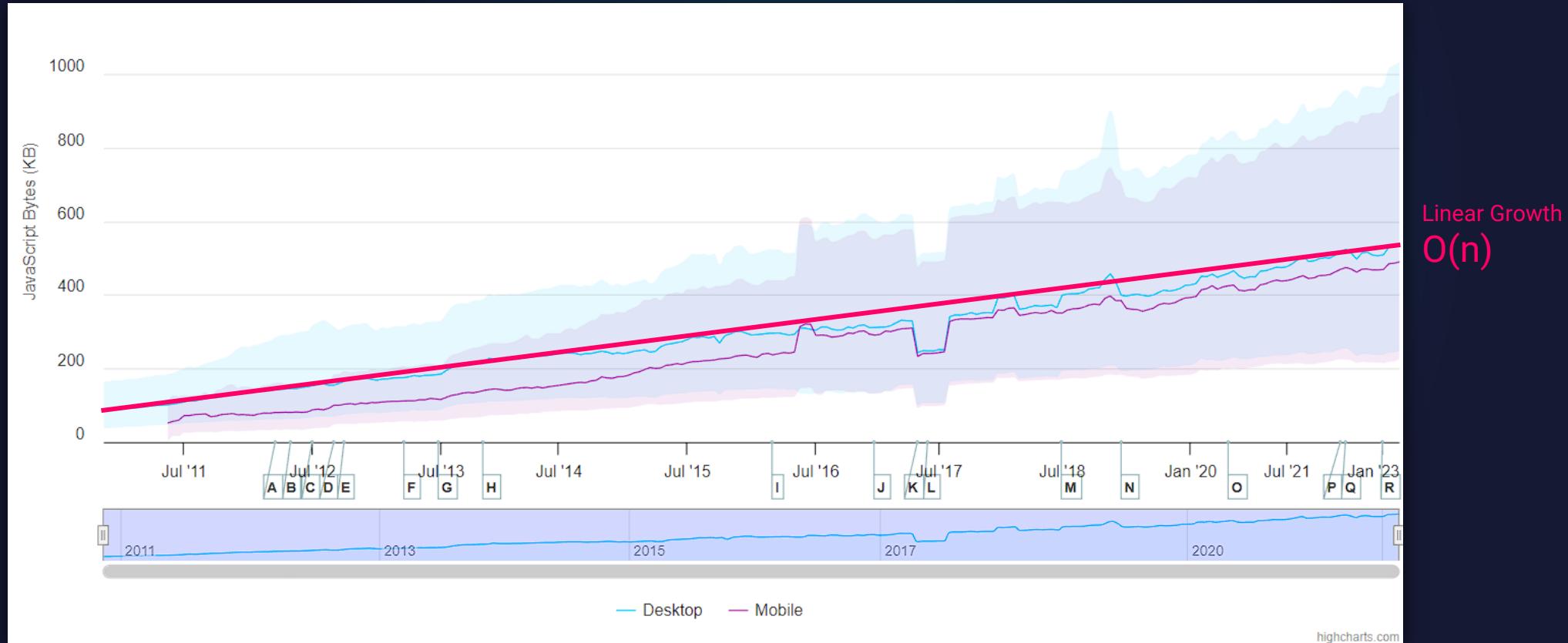
The today's challenge
& Qwik's role

How do we ensure great
performance on large
scaled web-apps?

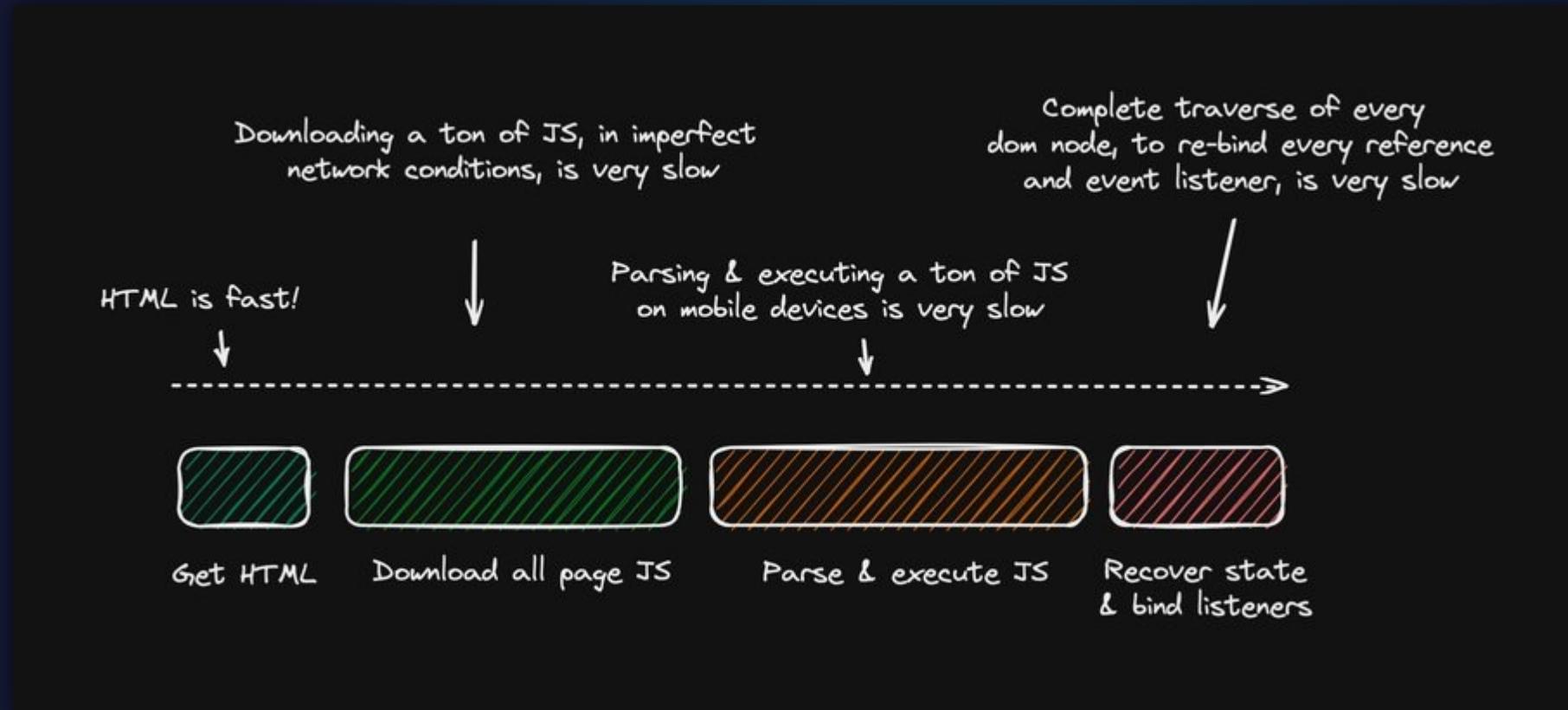
The increase of JS-Usage



The increase of JS-Usage



Hydration





Miško Hevery (Builder.io/Qwik)  

@mhevery · [Follow](#)

Hydration is a horrible workaround because web frameworks don't embrace how browsers actually work.

Yet somehow we have turned it into a virtue.

Hydration is a hack to recover the app&fw state by eagerly executing the app code in the browser.

That is why your app is slow.

5:46 AM · Apr 13, 2022 

[Read the full conversation on Twitter](#)

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<https://twitter.com/mhevery/status/1514087689246568448>

Why do we need
performance at scale?

Every 100ms faster → 1% more conversions

For **Mobify**, every 100ms decrease in homepage load speed worked out to a 1.11% increase in session-based conversion, yielding an average annual **revenue increase of nearly \$380,000**.

850ms faster → 7% more conversions

COOK reduced average page load time by 850 milliseconds which increased conversions by **7%**, **decreased bounce rates** by **7%**, and increased pages per session by **10%**.

1 seconds slowness → 10% less users

The **BBC** found **they lost an additional 10%** of users for every additional second their site took to load.

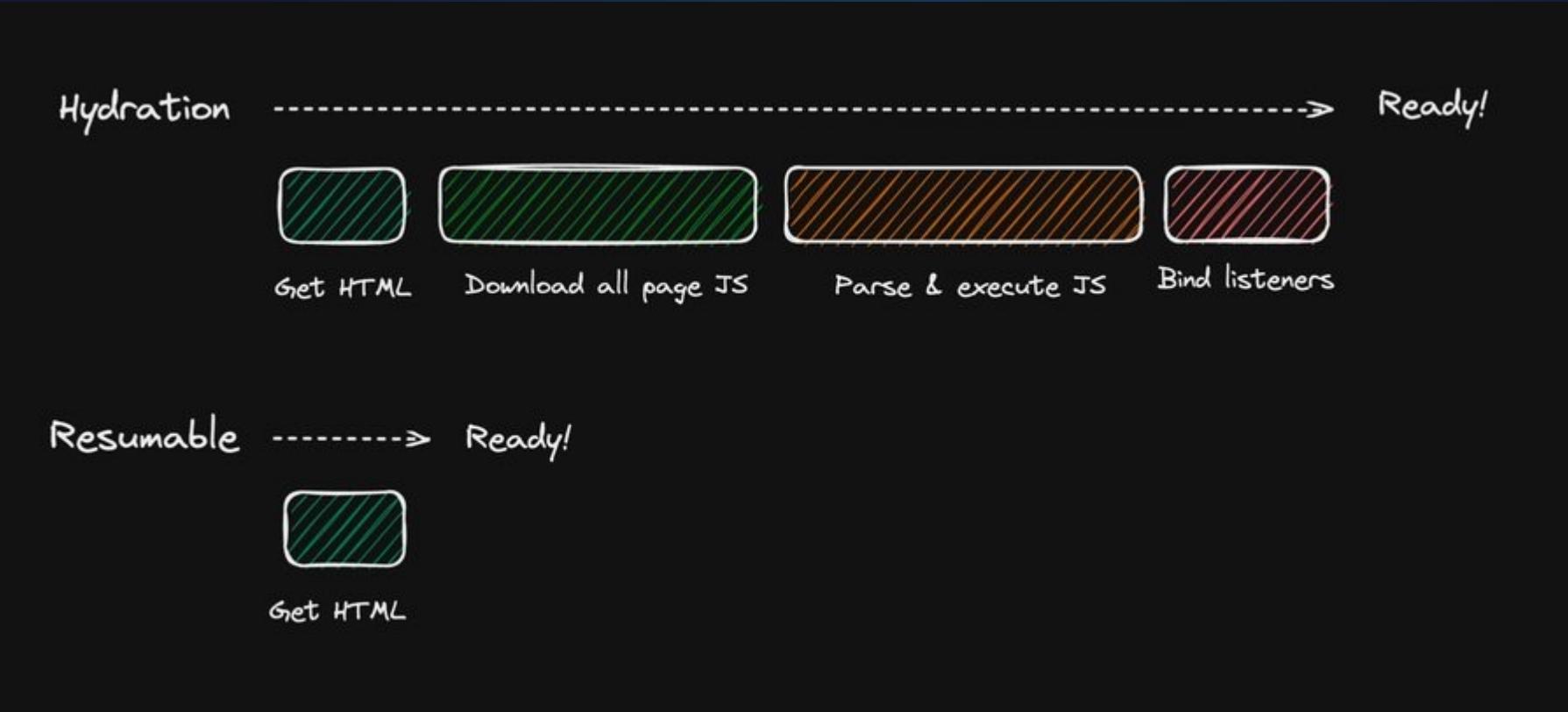
1 seconds slowness → 10% less users

The **BBC** found **they lost an additional 10%** of users for every additional second their site took to load.



- Less JavaScript
- Less Network- Traffic
- Less CPU-Pressure
- ❤ Supports healthy nature

Resumability



HYDRATION PROCESS
**What if we can
Skip Hydration?**

Resumability

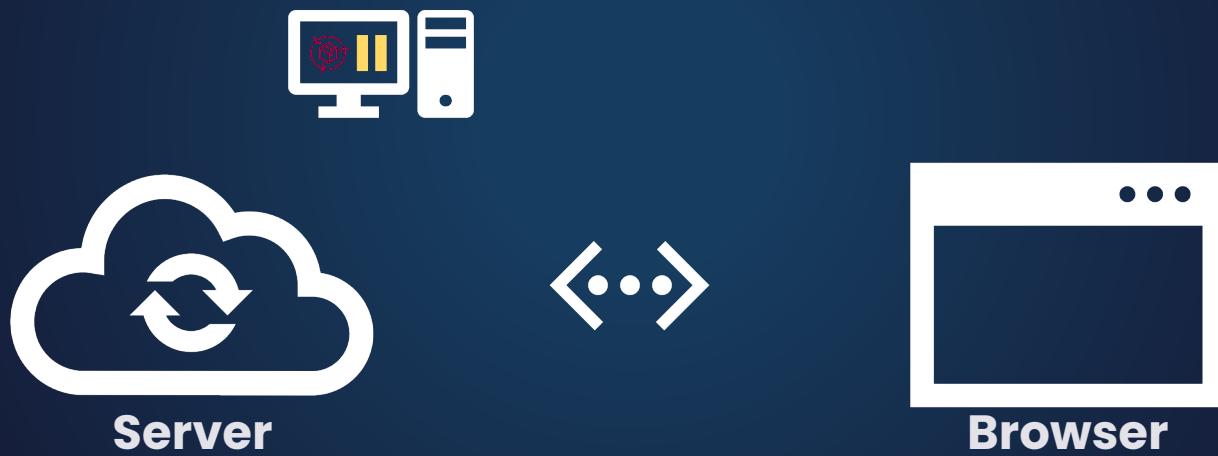
... is like **saving** & **restoring** the state of a **Virtual Machine**.



Resumability



Resumability



Resumability



DEMO



Part II

Optimizer & Loader

Optimizer



Optimizer



```
onClick$(() => {  
  /*.your code ... */  
});
```

Optimizer



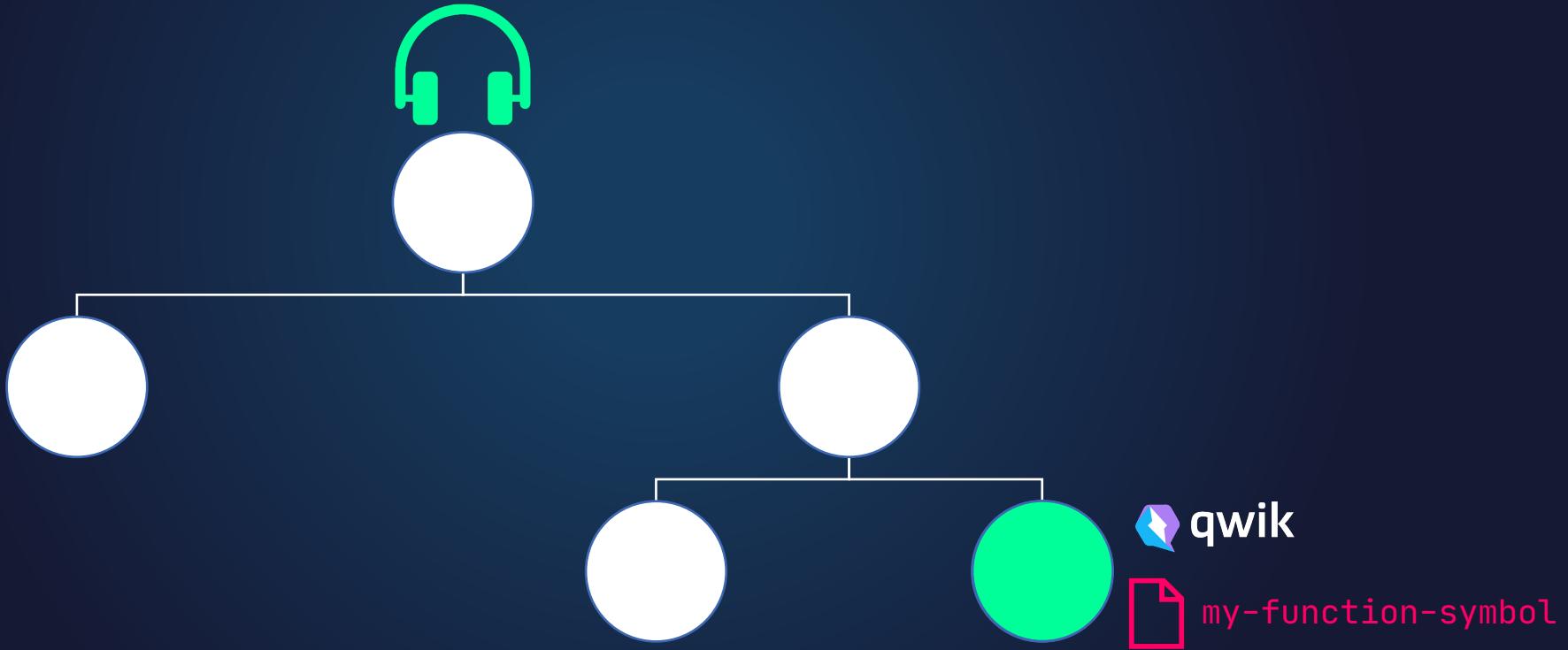
Optimizer

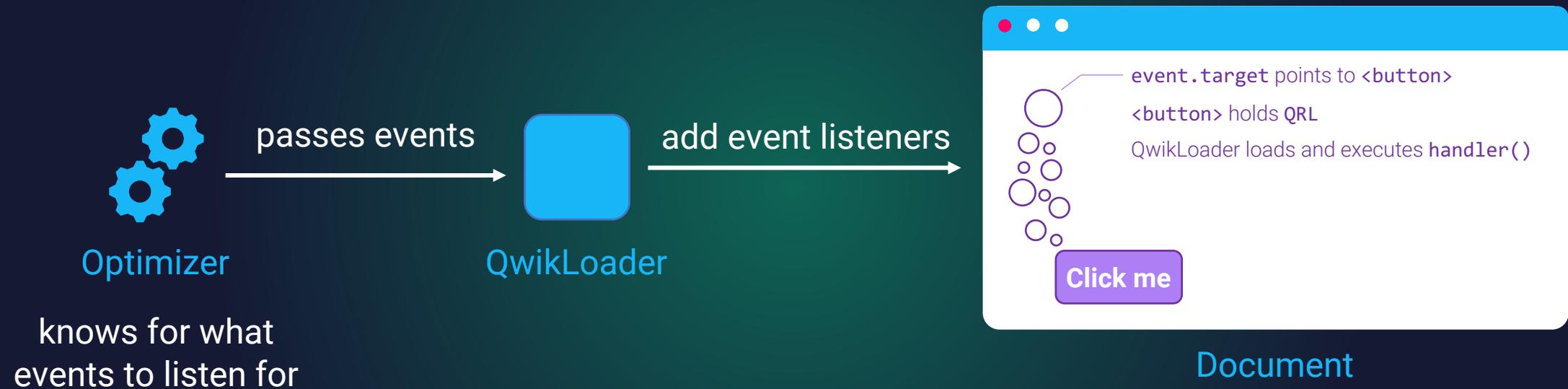


transforms

```
onClick(qrl(  
  './my-component.js',  
  'my-function-symbol'  
));
```

Loader





Prefetching

... loading JS sources is moved to its own Service Worker Thread.



CACHE

- | - 78476324.js
- | - 95834343.js
- | - 13834574.js
- | - ...

Part III

Components & Routing

Component

is enhanced progressively by **hooks**.

`component$`

TASKS

`useTask$`

`useVisibleTask$`

CONTEXT

`createContextId`

`useContext` `useContextProvider`

STATE

`useSignal`

`useStore`

SLOTS

 **useTask\$**

- 🧑 can listen to state changes
- 🏄 is executed on the server first

 **useTask\$**

• • •

Qwik

```
import { component$, useTask$ } from "@builder.io/qwik";

export const Text = component$(() => {
  const state = useStore({ text: 'Hello World' });

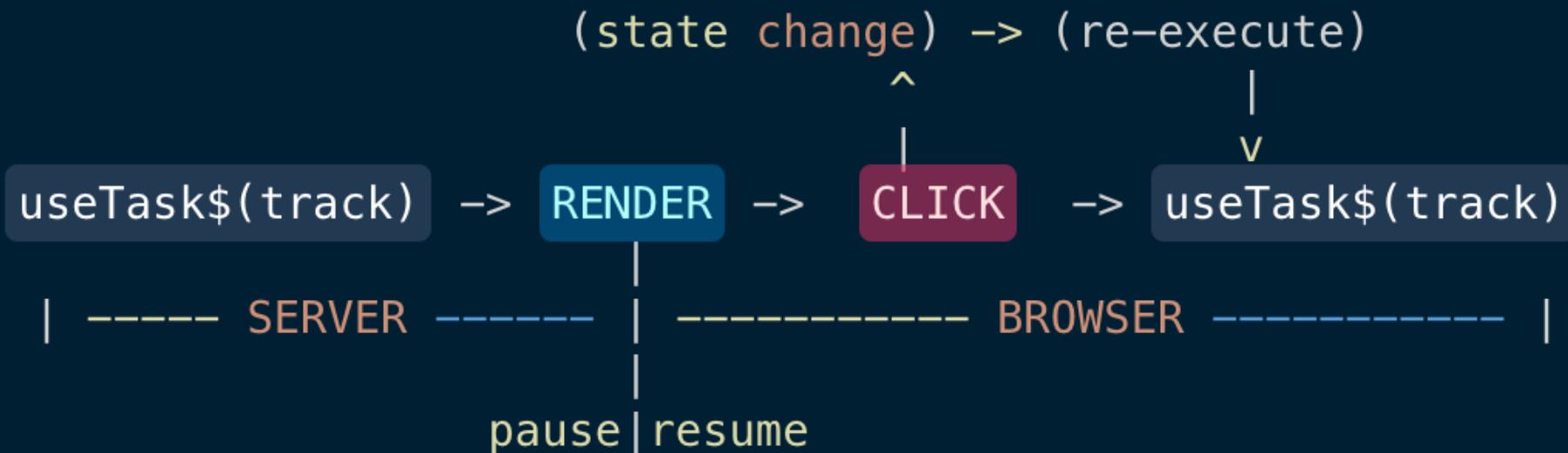
  useTask$(({ track }) => {
    const currentValue = track(() => state.text);

    // do something when state.text has changed.
  });

  return <span>{state.text}</span>;
})
```

 **useTask\$**

... is executed on the server & the client. 😱



useVisibleTask\$

-  is executed on the client
-  is triggered initially after first render
-  re-executes when dependency has changed



useVisibleTask\$

```
● ● ● Qwik

import { component$, useVisibleTask$ } from "@builder.io/qwik";

export const Text = component$(() => {
  const state = useStore({ text: 'Hello World' });

  useVisibleTask$((track) => {
    const currentValue = track(() => state.text);

    // do something when state.text has changed.
  });

  return <span>{state.text}</span>;
})
```

`useVisibleTask$` should
be your last resort!

<https://qwik.dev/docs/guides/best-practices/#use-usevisibletask-as-a-last-resort>

DEMO



Routing

... comes with **Qwik City**

components\$

PAGES

Routing

Dynamic Head

DATA

routeLoader\$

routeAction\$ Endpoints

SERVER

server\$

env

LAYOUTS

Integrations



React



Auth.js



unpic



Playwright



vitest

And many
more...

DEMO



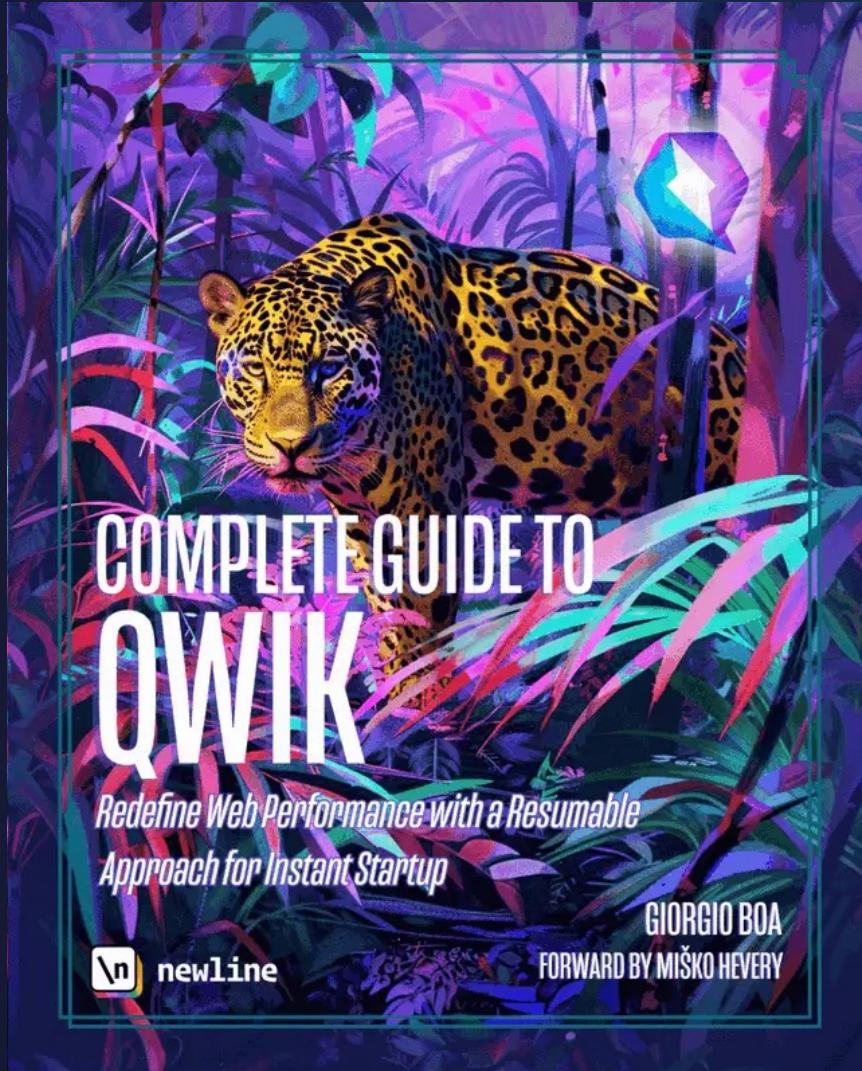
Community



Community



Join Discord via
qwik.builder.io



A new book about Qwik is available!



Written by **Giorgio Boa**

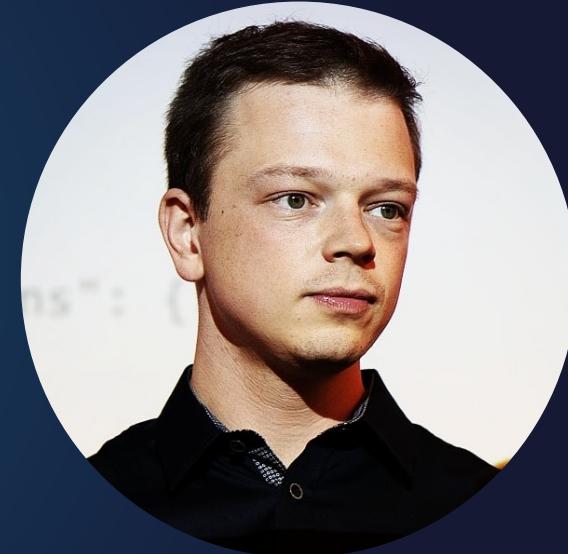
- ★ Concepts explained
- ★ All APIs explained
- ★ Full-Stack App walkthrough

<https://www.newline.co/courses/complete-guide-to-qwik>

Danke



[https://github.com/GregOnNet/
talk-qwik-the-resumable-web-framework.git](https://github.com/GregOnNet/talk-qwik-the-resumable-web-framework.git)



Gregor Woiwode, CTO



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