



Frontend in 2023

#FBP2023 - Rapperswil



Wir sind *smartive*. Wir stehen für digitale Lösungen und eine bizli andere Firmenkultur.

10
Über eine Dekade

27
Persönlichkeiten

10
Top 10 Best of Swiss
Web

19
Vierzehn
Teilhaber*innen

300
Erfolgreiche Projekte:
dreistellig

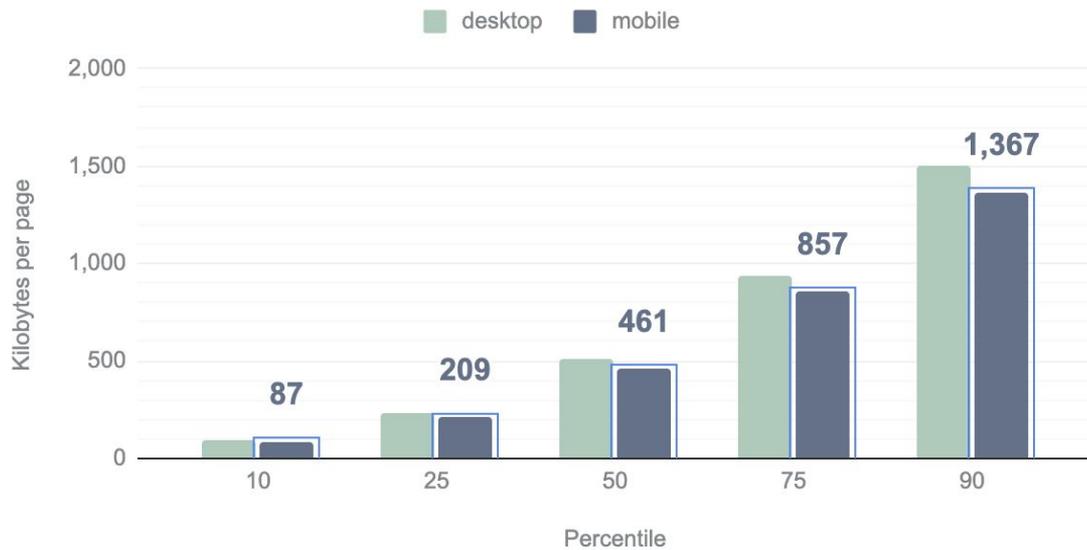
0
Chefs



Die Zeiten von HTML-first sind vorbei

Distribution of JavaScript kilobytes per page

Web Almanac 2022: JavaScript





NEXT.js



Remix





Das haben jetzt alle:

- Code splitting
- Lazy loading
- Tree shaking
- Prefetching



The big differentiator:

Rendering Strategien

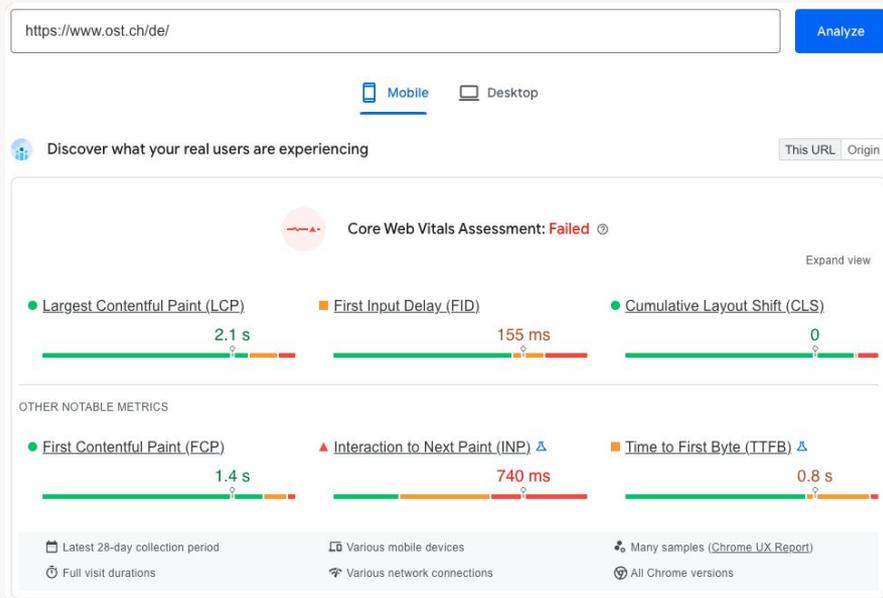


Die Stärken des Webs:

Zugänglichkeit & Distribution



Web Vitals



<https://pagespeed.web.dev/>

Impact der Strategien

Client Side Rendering

CSR

Leeres HTML Template vom Server. Seite wird im Client erstellt.

 SEO

 TTFB, FID

 FCP, CLS

Server Side Rendering

SSR

Komplettes HTML vom Server. Neu generiert bei jeder Abfrage.

 FCP, CLS

 TTFB, FID

Static Site Generation

SSG

Komplettes HTML vom Server. Erstellt beim Build.

 TTFB, FCP, CLS

 (FID)

Incremental Static Regeneration

ISR

Komplettes HTML vom Server. Erstellt beim Build und einigen Abfragen.

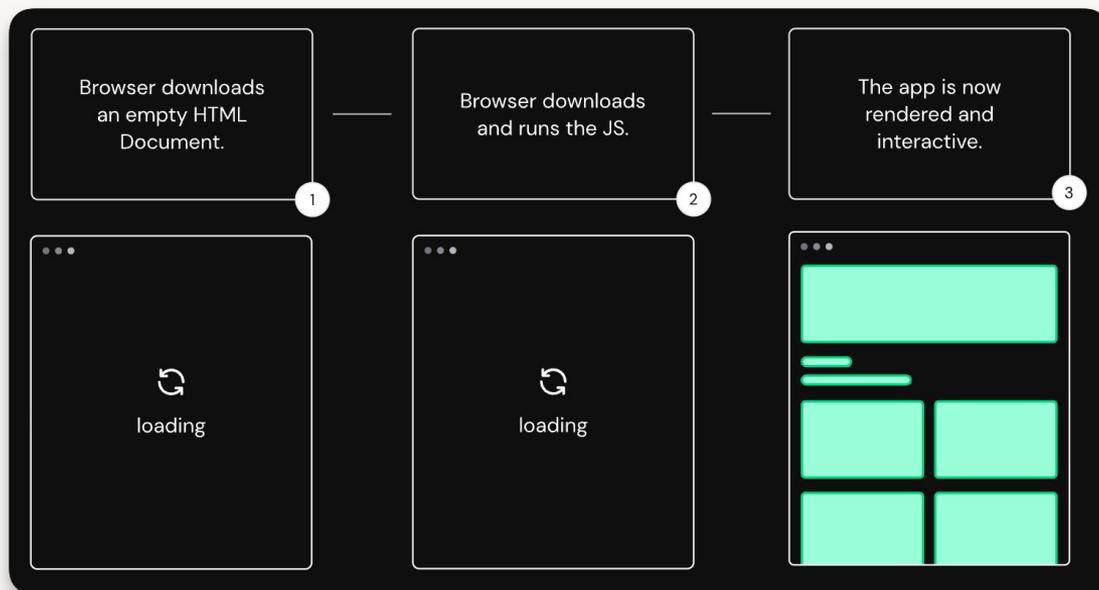
 TTFB, FCP, CLS

 (FID)

Frameworks

Framework	CSR	SSR	SSG	ISR
Next.js	✓	✓	✓	✓
Nuxt.js	✓	✓	✓	✓
Angular.js	✓	✓	✗	✗
Remix	✗	✓	✓ [*]	✗
Astro	✓	✓	✓	✗
Qwik	✓	✓	✓	✗

CSR





CSR

MIGROS Produkte in den Filialen

Produkt suchen...

Startseite > Getränke, Kaffee & Tee > Softdrinks



0.95

Kult Ice Tea Zitrone

50cl

[Verfügbarkeit in Filialen prüfen](#)

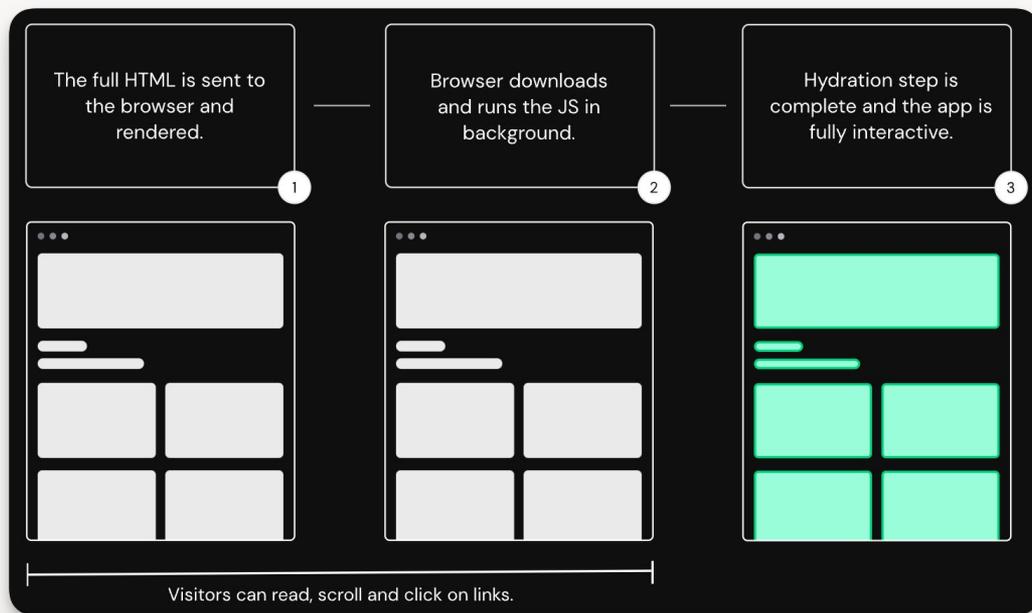
Wichtigste Merkmale

Marke & Labels



Inhaltsstoffe

SSR, SSG, ISR



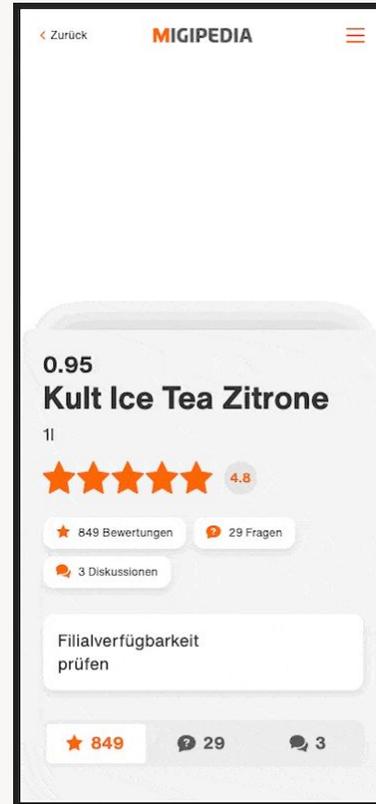


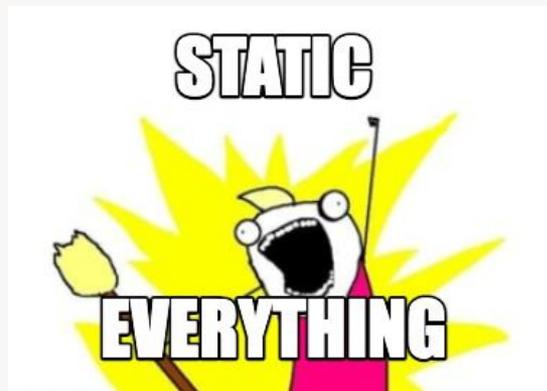
SSR





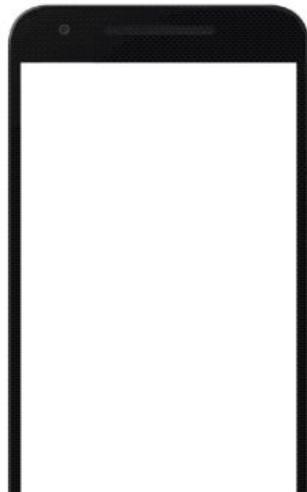
SSG, ISR



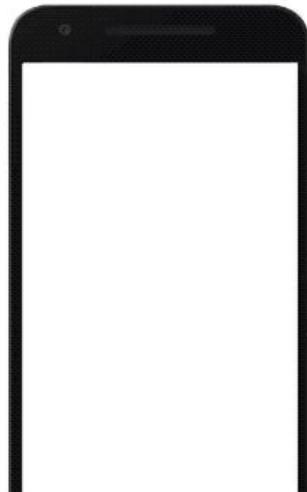


TIME TO INTERACTIVE

0s 00



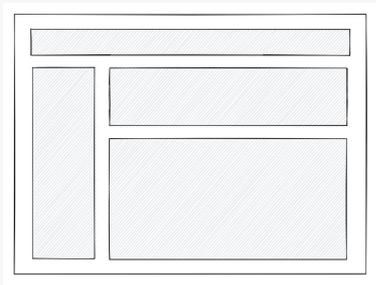
0s 00





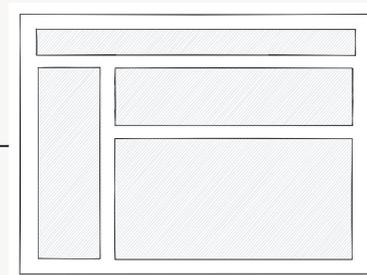
Hydration

Server Render

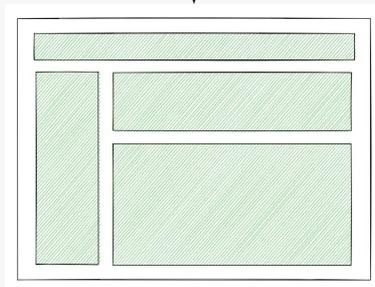


HTML, CSS

Client Render



HTML, CSS, Event
Listeners, App State, etc.



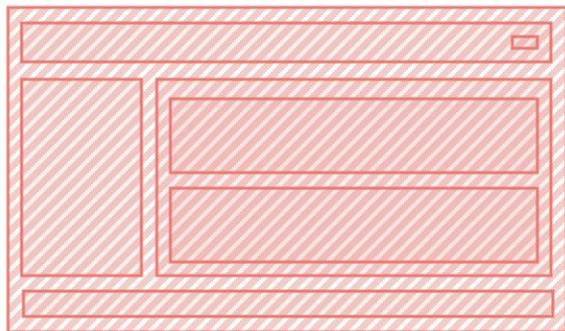


Doppelte Arbeit
für die *gesamte* App

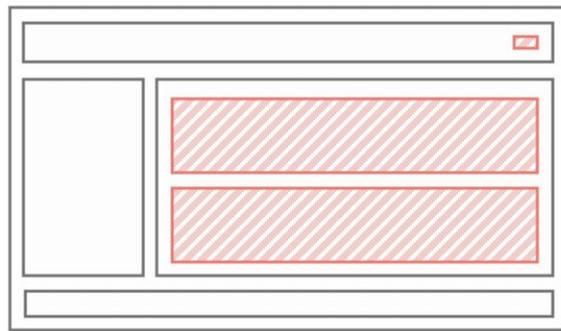


Hydration 2.0

Full Page Hydration



Component-Level Hydration



Examples: Astro, Qwik, React Server Components



Astro Islands



Astro Islands

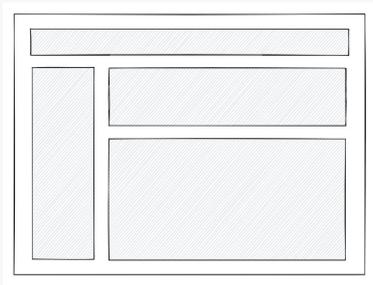
```
import MyReactComponent from '../components/MyReactComponent.jsx';
import MyVueComponent from '../components/MyVueComponent.vue';

// No Hydration, no JavaScript sent to client
<MyReactComponent />

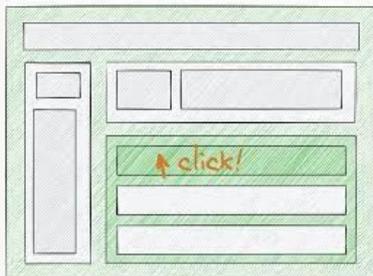
// This component gets hydrated
<MyVueComponent client:load />
```

Qwik Resumability

Server Render

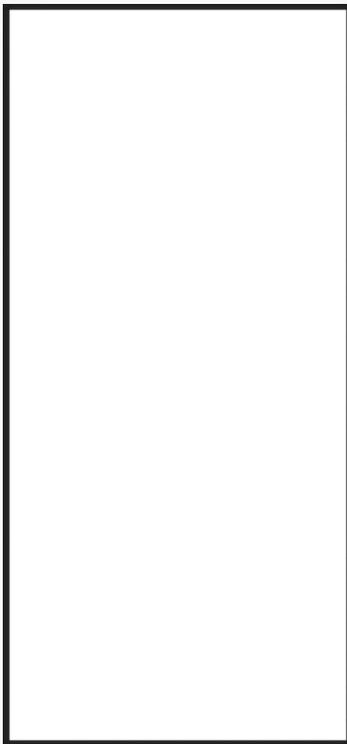


HTML, CSS, Serialized
Event Listeners, App
State, etc.



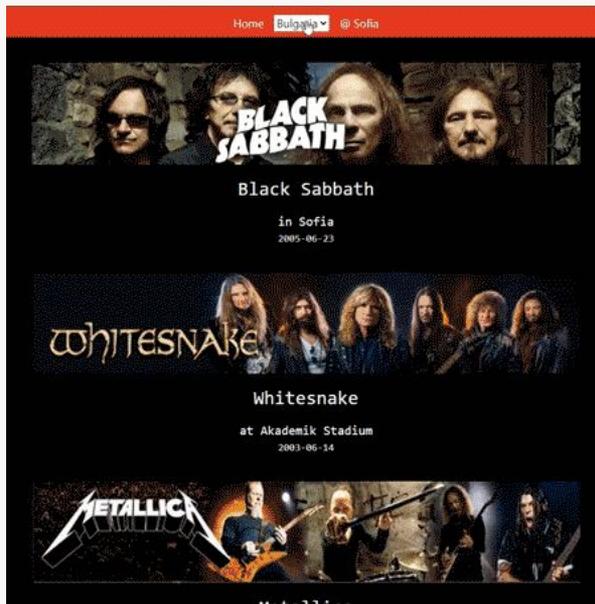
Qwik Resumability

```
<html>
  <body>
    <button on:click="./someJsFile#click">Click Button</button>
  </body>
  <script src="/qwikloader.js" events="click"></script>
</html>
```

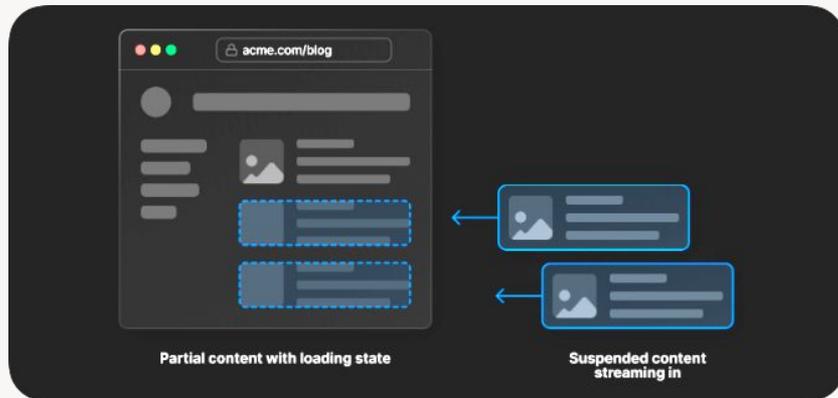
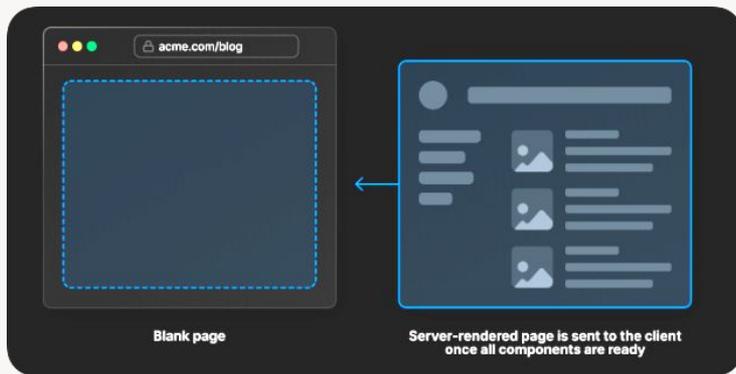




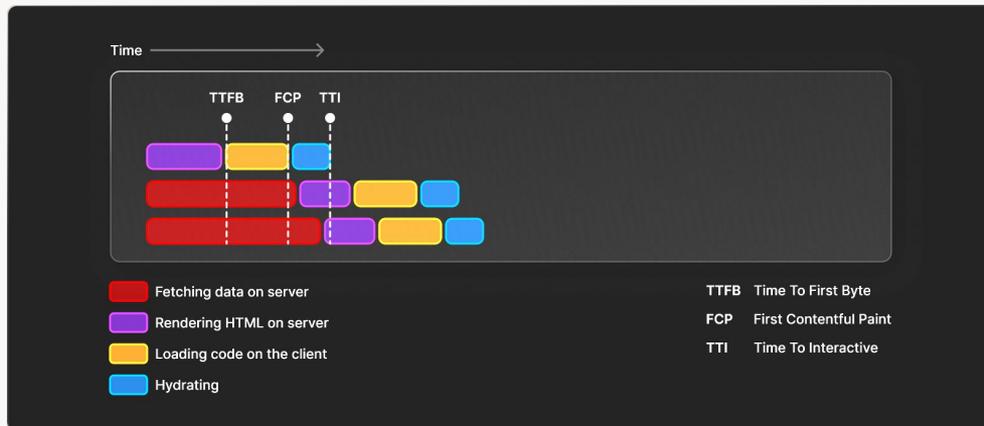
Streamed SSR



Streamed SSR



Streamed SSR



Next.js 13 - Streamed SSR

```
import { Suspense } from "react";
import { Header, Artist } from "../Components";

export const Page = () => (
  <section>
    <Header />
    <Suspense fallback={<p>Loading...</p>}>
      <Artist />
    </Suspense>
  </section>
);
```


Next.js 13 - Server Components

```
import { db } from "@utils/database";

export const ServerPost = () => {
  const post = await db.query("SELECT * FROM Posts...");

  return (
    <div>
      {post.content}
      <ClientReply />
    </div>
  );
}
```

```
'use client';

import { useState } from 'react';

export const ClientReply = () => {
  const [reply, setReply] = useState('');

  return (
    <textarea onChange={setReply}>
      {reply}
    </textarea>
  );
}
```



2023 - Rendering Strategien auf *Component Level*



Streamed SSR & Partial Hydration

Client Side Rendering

CSR

 SEO

 TTFB, FID

 FCP, CLS

Server Side & Static Rendering

SSR, SSG, ISR

 FCP, CLS, TTFB, FID



Ein wenig komplizierter als früher..



...aber auch für jeden Use Case
die beste *User Experience*



Dankä fürs Zuälose!



Noch nicht genug gehört?
Meld dich, wir können gerne
weiter quatschen.

mirco@smartive.ch

[@mircostraessle](https://www.instagram.com/mircostraessle)