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# STN VIDEO AND CORE WEB VITALS

Digital Video. Solved.



# What is a cumulative layout shift?

#protip check out faster using the app!

INSTALL

## Order confirmation

You have selected **56** items. Is this correct?

Submitting order...

No, go back

## Recommendations

# What is a cumulative layout shift?



Precompute sufficient space for embeds with a placeholder or fallback



Using browser dev tools and obtaining the final height of your embed code



Using media queries for responsive sites, reserve a min-height for the size

## Standard Embed Code

### STN Video embed code in your article

```
<div class='s2nPlayer k-abcGNIaU' data-type='float'></div>
<script type='text/javascript'
src='https://embed.sendtonews.com/player3/embedcode.js?fk
=abcGNIaU&cid=1234&offsetx=0&offsety=112&floatwidth=400
&floatposition=bottom-right' data-type='s2nScript'></script>
```

## Sample CSS Media Queries

```
<style>
@media only screen and (max-width: 400px) {
.s2nPlayer {
  min-height: 250px;
}
}

@media only screen and (min-width: 400px) {
.s2nPlayer {
  min-height: 350px;
}
}

@media only screen and (min-width: 600px) {
.s2nPlayer {
  min-height: 450px;
}
}
</style>
```

## NO CSS

### Parmesan Roasted Cauliflower

The combination of meaty, caramelized, roasted cauliflower florets and some just-this-side-of-burnt onions has become our go-to winter side dish recipe.



Cauliflower has gone from a trusted side dish to the superhero of low-carb replacements and everything in between. Get our best cauliflower recipes, from basic roasted cauliflower to cauliflower pizza, right here.

Raw cauliflower transforms into golden, caramelized deliciousness in the oven. If you roast it with just olive oil, salt and pepper, it's a tasty snack. This roasted cauliflower recipe is the perfect simple side dish for your fall and winter meals.

As much as I love basic roasted cauliflower, it's the perfect vehicle for creative flavorings. I came

0.170

## CSS

### Parmesan Roasted Cauliflower

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Cauliflower has gone from a trusted side dish to the superhero of low-carb replacements and everything in between. Get our best cauliflower recipes, from basic roasted cauliflower to cauliflower pizza, right here.

Raw cauliflower transforms into golden, caramelized deliciousness in the oven. If you roast it with just olive oil, salt and pepper, it's a tasty snack. This roasted cauliflower recipe is the perfect simple side dish for your fall and winter meals.

0.00

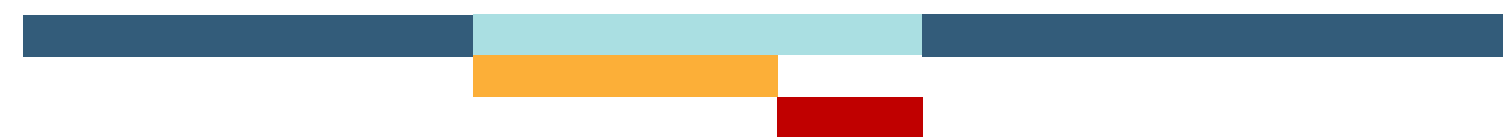
# FID – FIRST INPUT DELAY

## IMPROVING YOUR SCORE

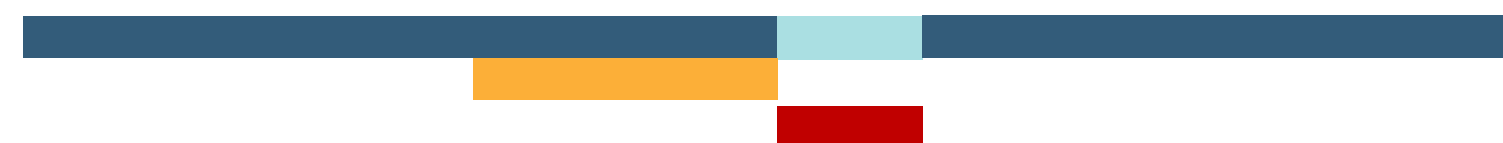
STN Video avoids long tasks and large JavaScript files by implementing the following:

- Scripts are modularized to reduce the amount JavaScript needed at any given time.
- The script tag is split into two components - critical and non critical scripts
  - The critical scripts are optimized to avoid blocking the initial render (and your LCP).
  - To further reduce unnecessary JavaScript, the second half of the script will not be loaded unless a player is embedded on the page.

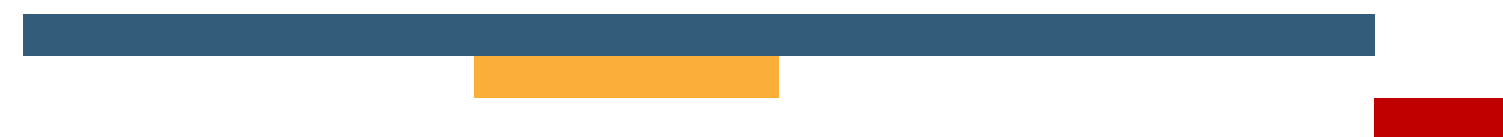
`<script>`



`<script async>`



`<script defer>`



■ HTML Parsing    ■ HTML Parsing Paused    ■ Script Download    ■ Script Execution

# LARGEST CONTENTFUL PAINT (LCP) - IMPROVING LOADING PERFORMANCE

STN applies adaptive loading techniques to adjust the video quality to be appropriate for the user's bandwidth

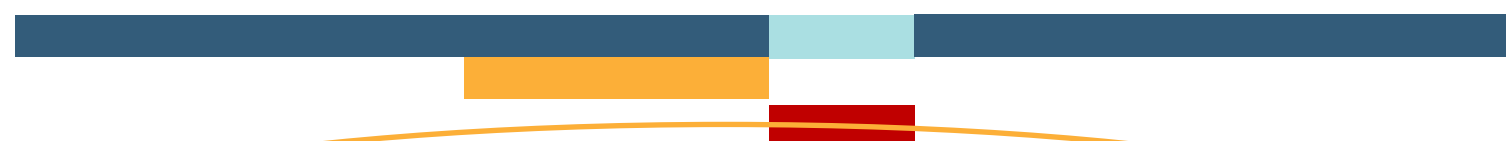
Non-critical components are loaded in a non-render blocking manner

Publishers can control when STN video loads through async and defer. STN recommends using **async** as a balance between performance and revenue

<script>

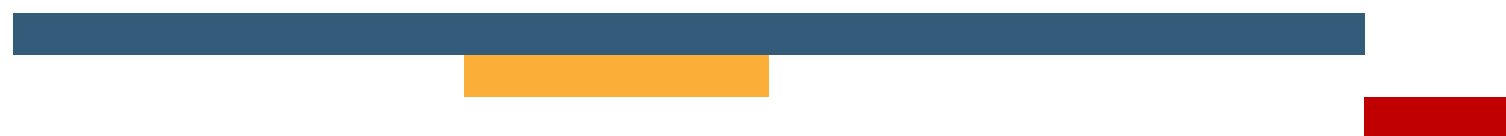


<script async>



```
<div class='s2nPlayer k-abcGNlaU' data-type='float'></div>
<script type='text/javascript' async
src='https://embed.sendtonews.com/player3/embedcode.js?fk=abcGNlaU&cid=1234&offsetx=0&offsety=112&floatwidth=400&floatposition=bottom-right' data-type='s2nScript'></script>
```

<script defer>




```
<div class='s2nPlayer k-abcGNlaU' data-type='float'></div>
<script type='text/javascript' defer
src='https://embed.sendtonews.com/player3/embedcode.js?fk=abcGNlaU&cid=1234&offsetx=0&offsety=112&floatwidth=400&floatposition=bottom-right' data-type='s2nScript'></script>
```



**Parmesan Roasted Cauliflower**

The combination of meaty, caramelized, roasted cauliflower florets and some just-this-side-of-burnt onions has become our go-to winter side dish recipe.

Parmesan-Roasted Cauliflower



PARMESAN  
ROASTED  
CAULIFLOWER

Cauliflower has gone from a trusted side dish to the superhero of low-carb replacements and everything in between. Get our best cauliflower recipes, from basic roasted cauliflower to cauliflower pizza, right here.

Raw cauliflower transforms into golden, caramelized deliciousness in the oven. If you roast it with just olive oil, salt and pepper, it's a tasty snack. This roasted cauliflower recipe is the perfect simple side dish for your fall and winter meals.

Elements Console Sources Network Performance Memory Lighthouse

Performance 96 Best Practices 100

0-49 50-89 90-100


96 Performance

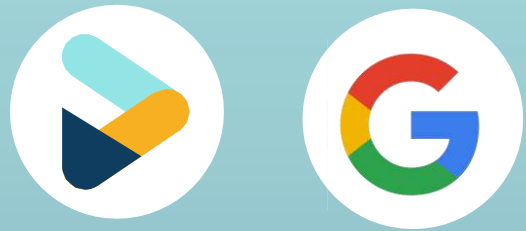
Metrics

First Contentful Paint	0.2 s	Time to Interactive	1.9 s
Speed Index	1.5 s	Total Blocking Time	0 ms
Largest Contentful Paint	0.9 s	Cumulative Layout Shift	0

Values are estimated and may vary. The [performance score is calculated](#) directly from these metrics. [See calculator.](#)

[View Original Trace](#)





# STN VIDEO AND YOUR USER EXPERIENCE

Digital Video. Solved.



# STN VIDEO IS A GCPP BECAUSE WE ARE DEDICATED TO YOUR SUCCESS



Strategy



Content



Sales



Product



Tech



Marketing



Training



Rev Ops



Development



# WHY CORE WEB VITALS?

STN VIDEO IS FOCUSED ON HELPING PUBLISHERS WITH CORE WEB VITALS BECAUSE THEY GIVE **YOUR USERS** THE **BEST POSSIBLE EXPERIENCE**

## HOW WE HELP



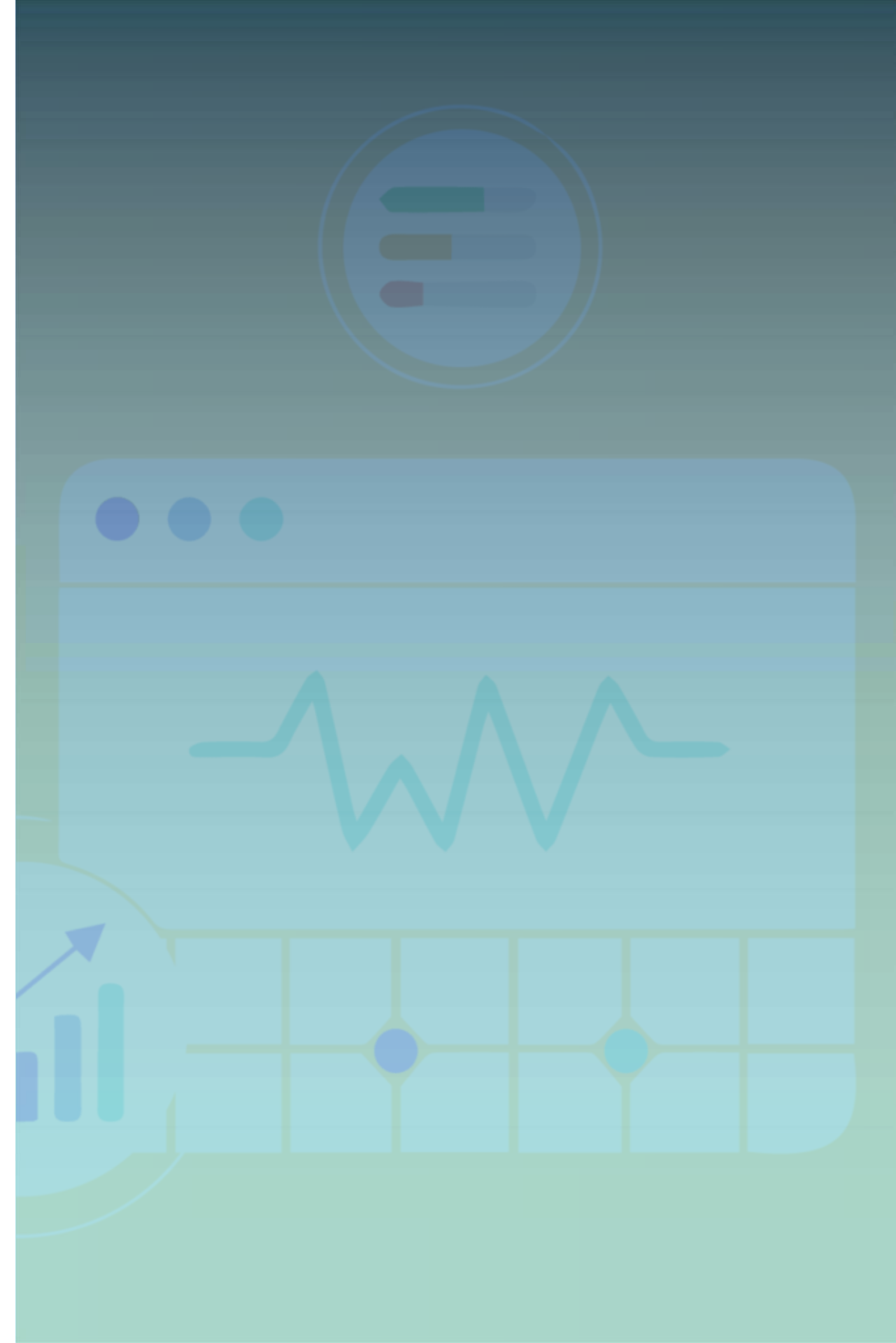
STN will dedicate a team devoted to your Core Web Vitals Strategy



We know this isn't a "one size fits all" solution. Our team will address any specific challenges you have



We work with you over the course of several weeks in regard to video, helping boost CWV for your site(s)



# STN VIDEO

# SUCCESS STORY

# LAS VEGAS REVIEW-JOURNAL

After working hand in hand with STN Video on their user experience strategy and adopting our full OVP in September 2020 the ReviewJournal.com saw:



**536% INCREASE**  
IN DIGITAL VIDEO  
REVENUE



**710% INCREASE**  
IN MONTHLY  
VIDEO PLAYS



**41% INCREASE**  
IN MONTHLY  
PAGE VIEWS

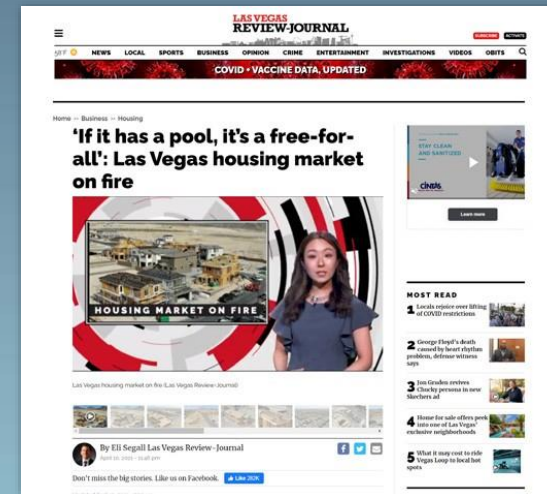


**22% INCREASE**  
IN MONTHLY  
VISITORS



**9% INCREASE**  
IN RETURNING  
TIME ON PAGE

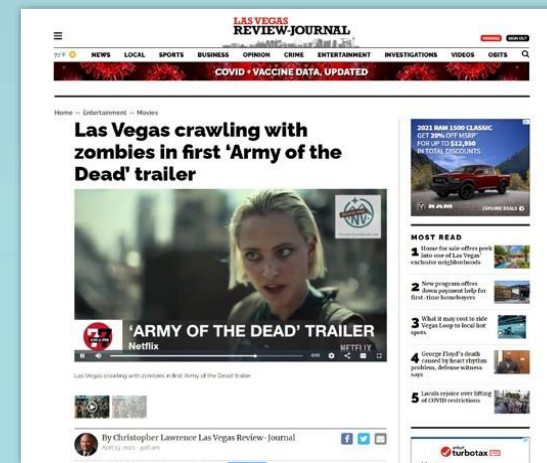
**ENHANCED ENGAGEMENT:** the Review-Journal also saw user engagement increases on specific sections, illustrating the power and quality of STN's full content library



**Local News**  
Page View Increase: **57%**  
Visitors Increase: **51%**



**Raiders/NFL**  
Page View Increase: **63%**  
Visitors Increase: **42%**



**Entertainment**  
Page View Increase: **28%**  
Visitors Increase: **23%**

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# Core Web Vitals: Measuring Experience

Melissa Mitchell  
Web Ecosystem Consultant, Google  
July 15, 2021

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**What are “Core Web  
Vitals”?**

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Core Web Vitals is an initiative by Google to provide unified **guidance for quality signals** that are essential **to delivering a great user experience** on the web.

- Core Web Vitals Announcement

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## Two primary goals:

1. **Simplify** the landscape around measuring site experience
  2. Help sites focus on the **metrics that matter most**
-

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# Three focus areas in 2020:

## Loading






Is it *happening*?

## Interactivity

Is it *responsive*?

## Visual Stability

Is it *delightful*?

 <input type="text" value="contentbazaar.co/20160314/pi-way"/>	 <input type="text" value="contentbazaar.co/20160314/pi-way"/>	 <input type="text" value="contentbazaar.co/20160314/pi-way"/>
	<p> Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor <a href="#">incididunt ut labore et dolore magna</a> aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco</p> 	<p> Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis</p>

---

# Loading

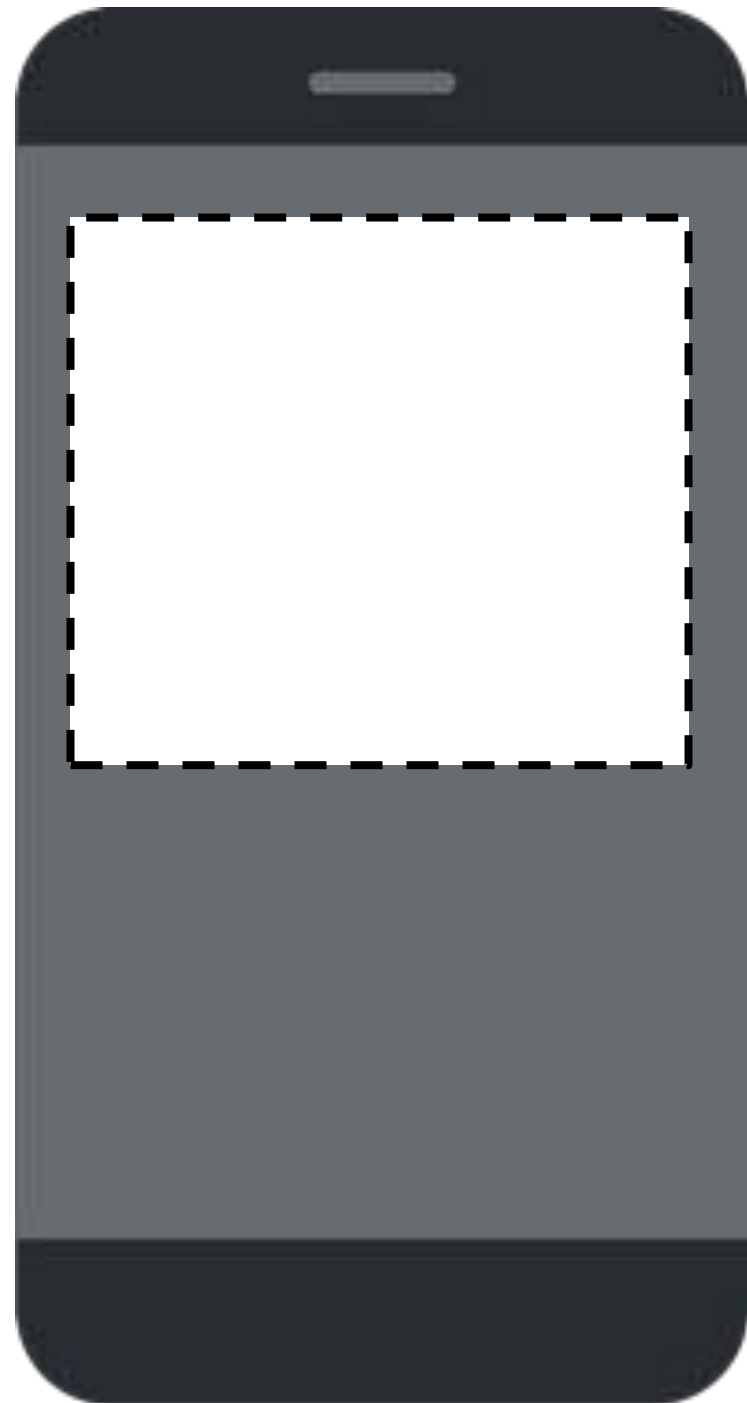
---

# Largest Contentful Paint (LCP)

**What:** The time it takes to render the largest image or text block within the viewport

**Units:** seconds

**Why:** This is a good measurement of how fast the user perceives content to load.



# Example

☀️ ☰

Awesome Section 1 >

...

Awesome Section 2 >

...

☀️ ☰

**My Super  
Awesome Title**

...

Who love sports? This is our incredible sports article

---

Our second most-awesome sports article. Click here to read all.

☀️ ☰

**My Super  
Awesome Title**

...

Who love sports? This is our incredible sports article

---

Our second most-awesome sports article. Click here to read all.

...

☀️ ☰


**My Super  
Awesome Title**

...

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---

Our second most-awesome sports article. Click here to read all.



☀️ ☰


**My Super  
Awesome Title**



Who love sports? This is our incredible sports article

---

Our second most-awesome sports article. Click here to read all.



# Example

Animals playing sports

[All](#) News Images Video

Animals playing sports

[All](#) News Images Video

**Warning:**  
These articles may cause cuteness overload

Animals playing sports

[All](#) News Images Video

**Warning:**  
These articles may cause cuteness overload

[Top 10 Videos](#) - The best demonstration of animal athletics! Come watch kitties play yarn soccer, penguins stealing second base, and will the rabbit beat the tortoise?

[Penguin Baseball!](#)  
Will the Chinstraps beat the Emperors this year?

Animals playing sports

[All](#) News Images Video

**Warning:**  
These articles may cause cuteness overload

[Top 10 Videos](#) - The best demonstration of animal athletics! Come watch kitties play yarn soccer, penguins stealing second base, and will the rabbit beat the tortoise?

[Penguin Baseball!](#)  
Will the Chinstraps beat the Emperors this year?

Animals playing sports

[All](#) News Images Video

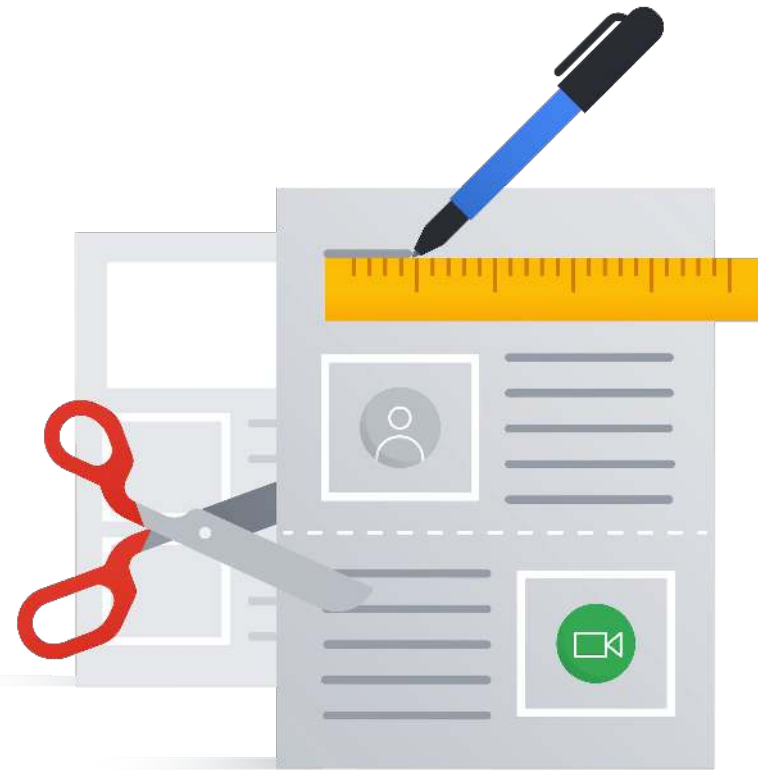
**Warning:**  
These articles may cause cuteness overload

[Top 10 Videos](#) - The best demonstration of animal athletics! Come watch kitties play yarn soccer, penguins stealing second base, and will the rabbit beat the tortoise?

[Penguin Baseball!](#)  
Will the Chinstraps beat the Emperors this year?

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# Common Problems



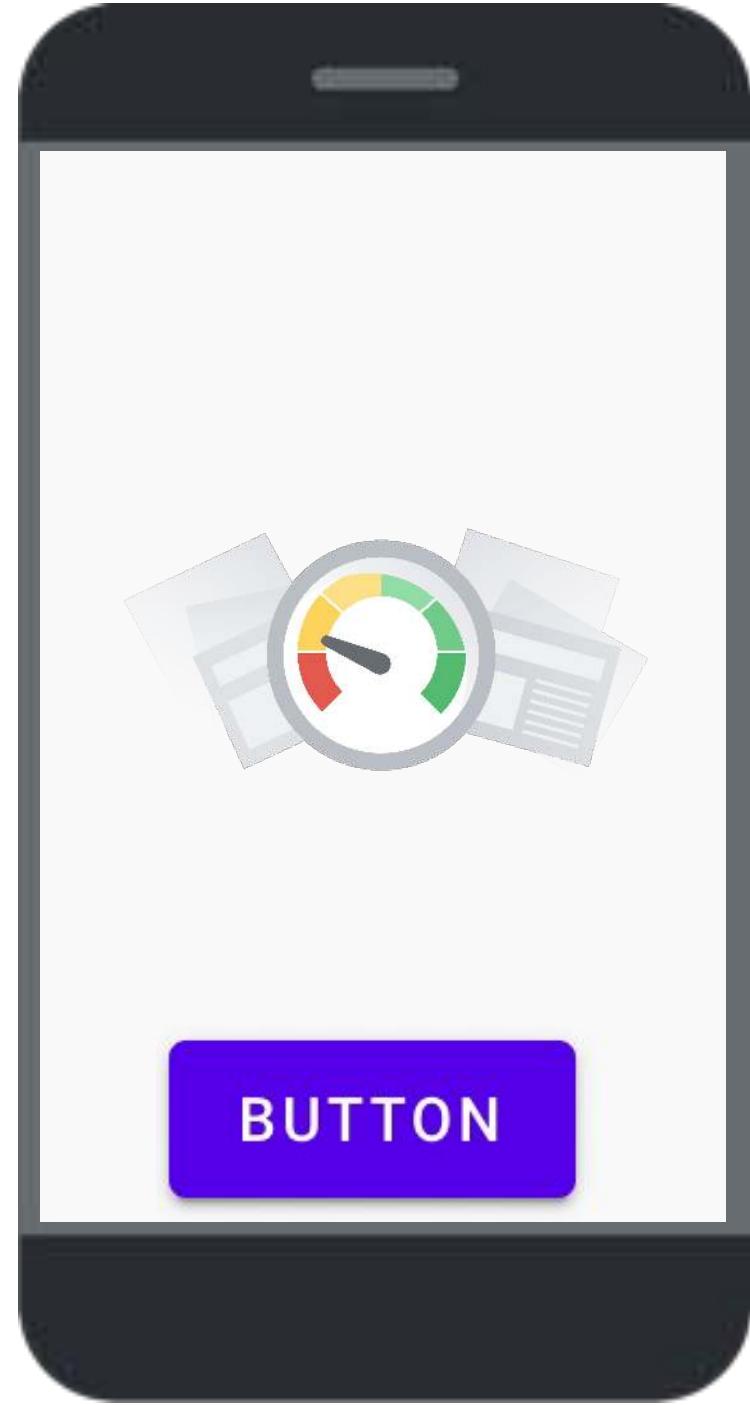
- Render-blocking JavaScript and CSS
- Slow server response times
- Slow resource load times
- Client-side rendering

More optimizing LCP tips: <https://web.dev/optimize-lcp/>

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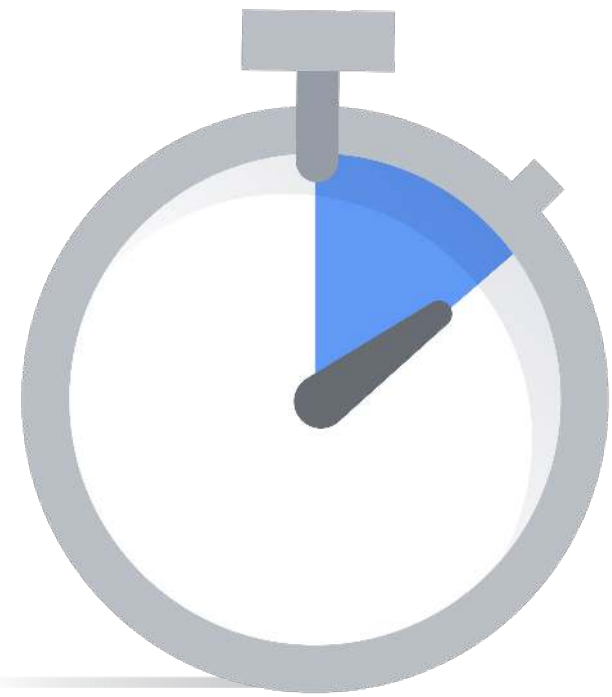
---

# Interactivity



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# First Input Delay (FID)



**What:** Time between a user's first touch/interaction and the time it takes the main thread to respond.

**Units:** milliseconds

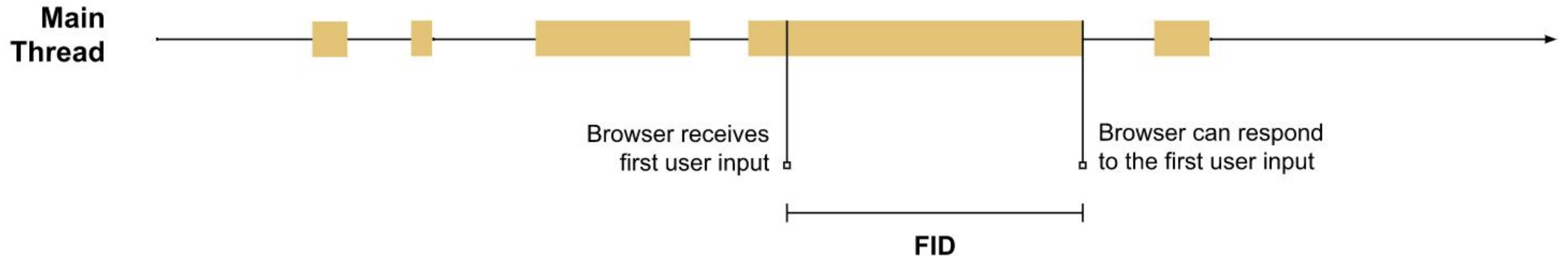
**Why:** This is a good measurement of how the user perceives the site's interactivity.

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# FID and the Main Thread

It can take longer for a site to respond to a user's input if the main thread is busy with long JavaScript tasks.



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# Common Problems



Primary cause: **heavy JavaScript execution**. Possible fixes:

- Break up long tasks
- Optimize your page for interaction readiness
- Use a web worker
- Reduce JavaScript execution time

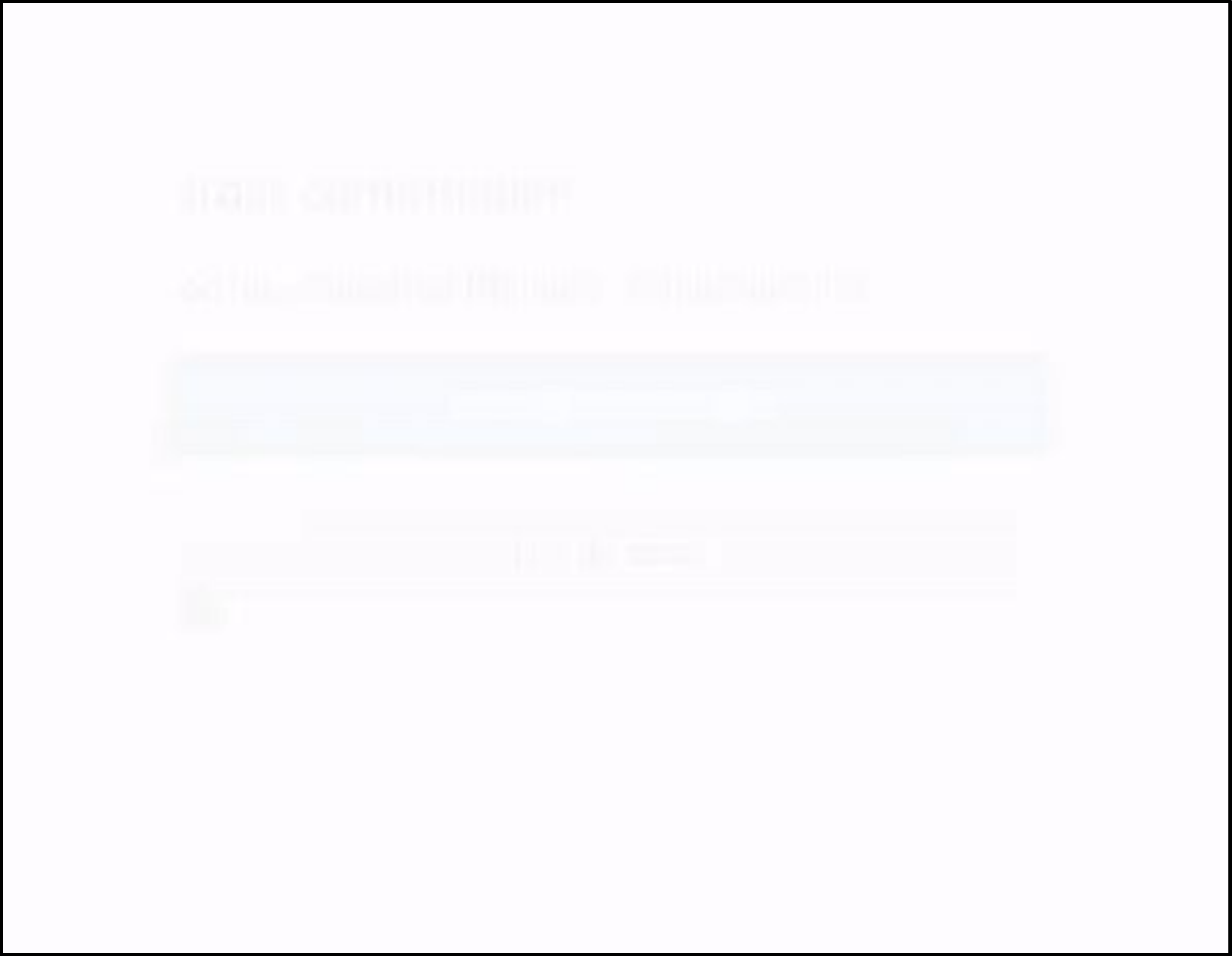
More optimizing FID tips: <https://web.dev/optimize-fid/>

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# Visual Stability

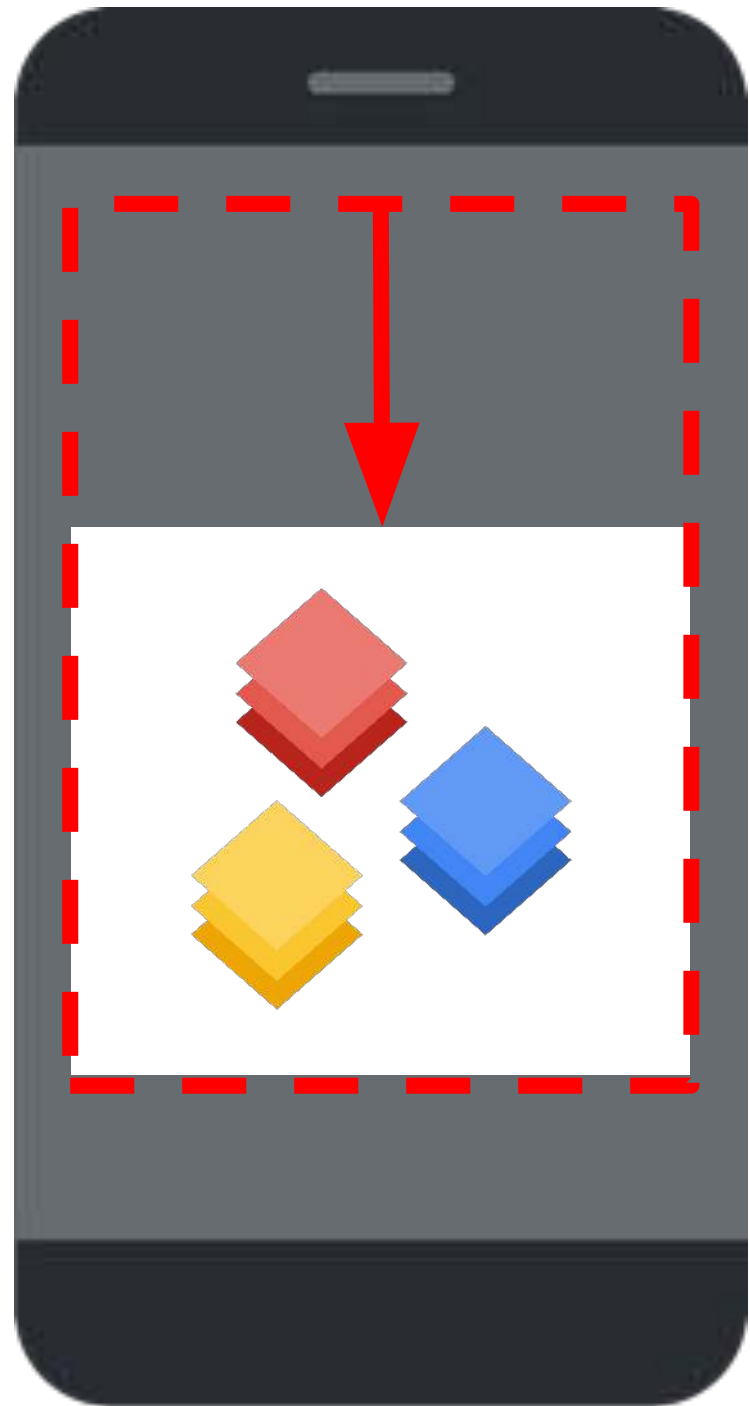
—



—

---

# Cumulative Layout Shift (CLS)



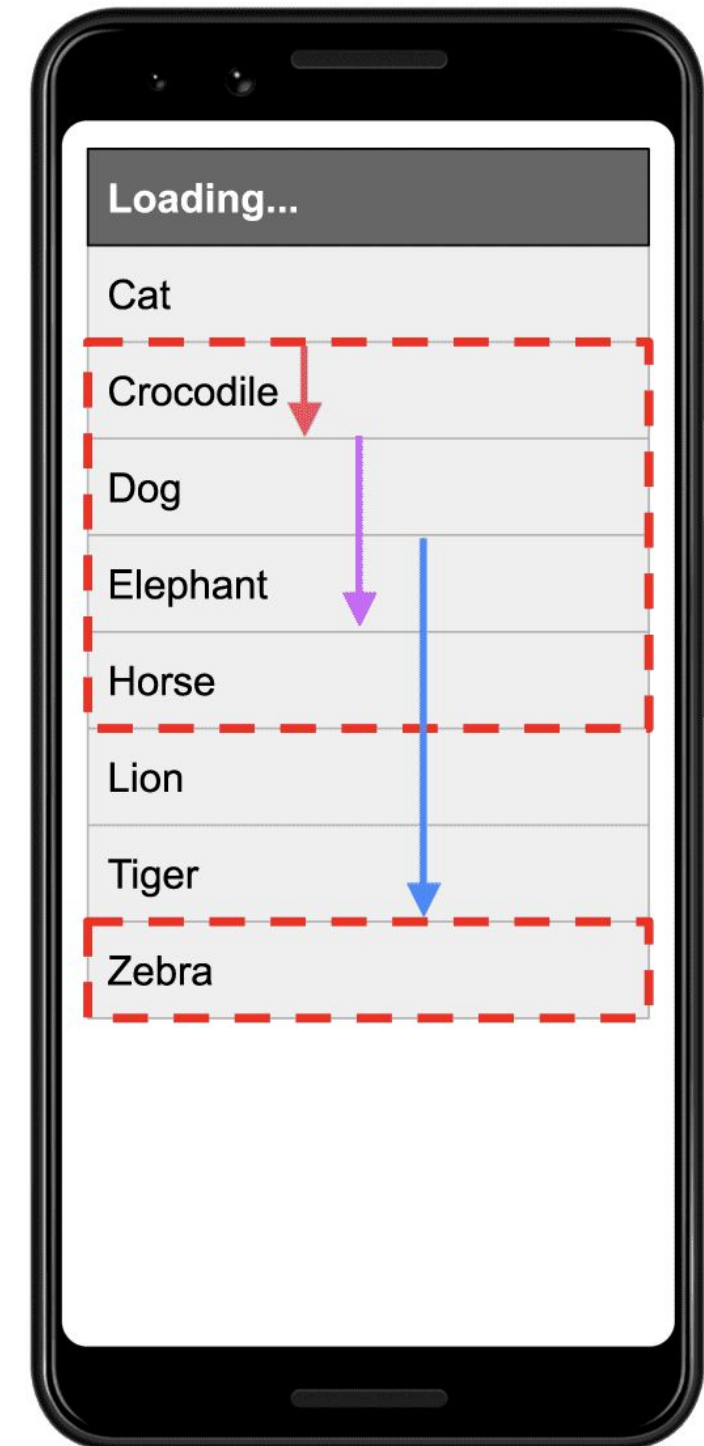
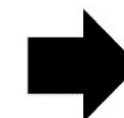
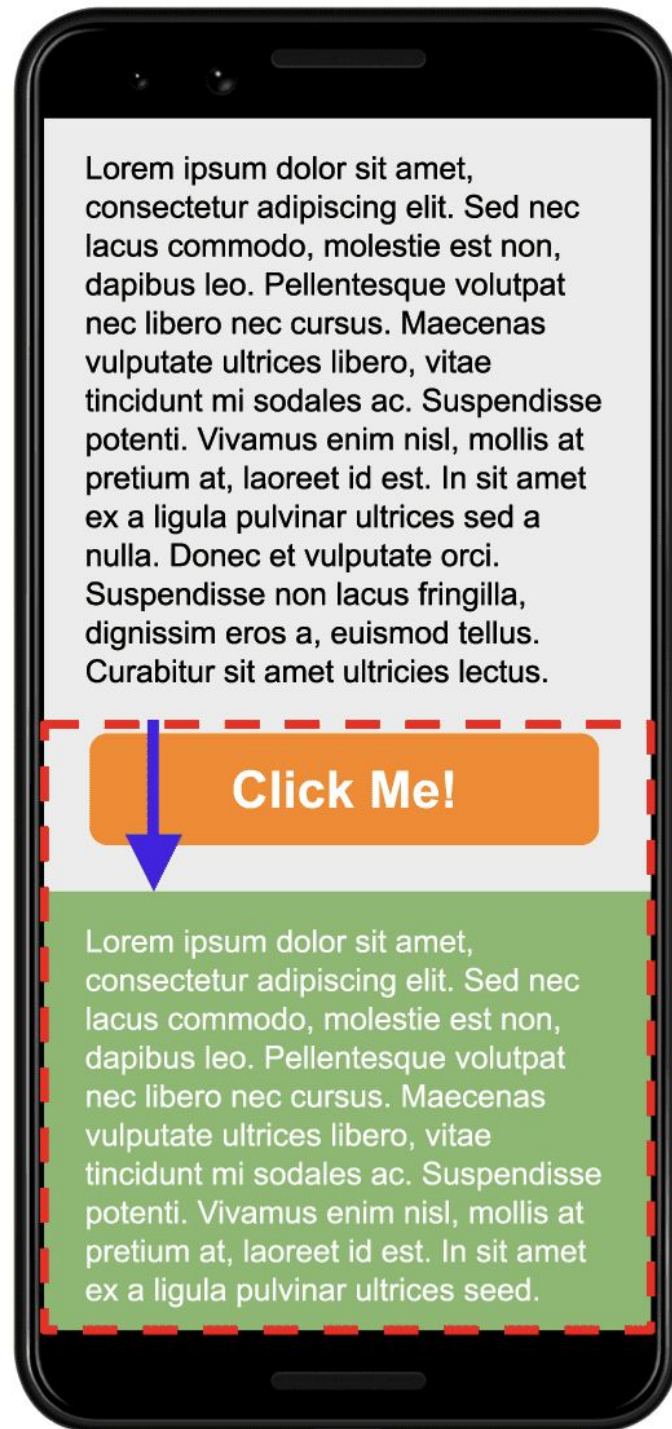
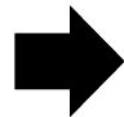
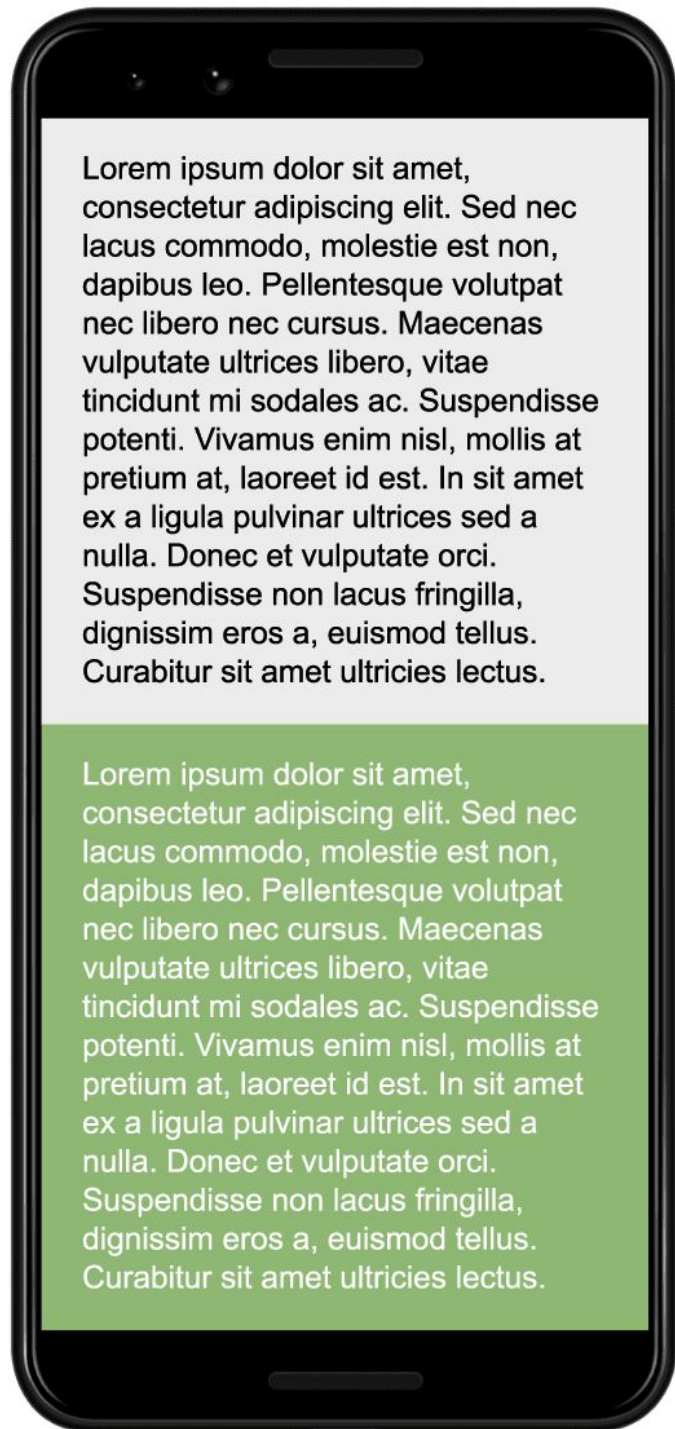
**What:** A sum of measurements based on the unexpected shifts a user experiences on a page.

**Units:** custom

**Why:** This allows us to measure how often and interruptive layout shifts are during the user journey.

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# Examples



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# 2021 Updates to CLS

In April 2021, the Core Web Vitals Team announced changes to CLS to have the metrics be more reflective of user experiences on long-lived pages. The changes include:

- CLS will now be measured in session windows
- Session windows have a max of 5 seconds
- Session gaps are 1 second
- The largest CLS in of all the session windows will be reported



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# Common Problems



- Images without dimensions
- Ads, embeds, and iframes without dimensions
- Dynamically injected content
- Web Fonts causing FOIT/FOUT
- Actions waiting for a network response before updating DOM

More optimizing CLS tips: <https://web.dev/optimize-cls/>

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*“This is cool and all,  
but **why do I care?**”*

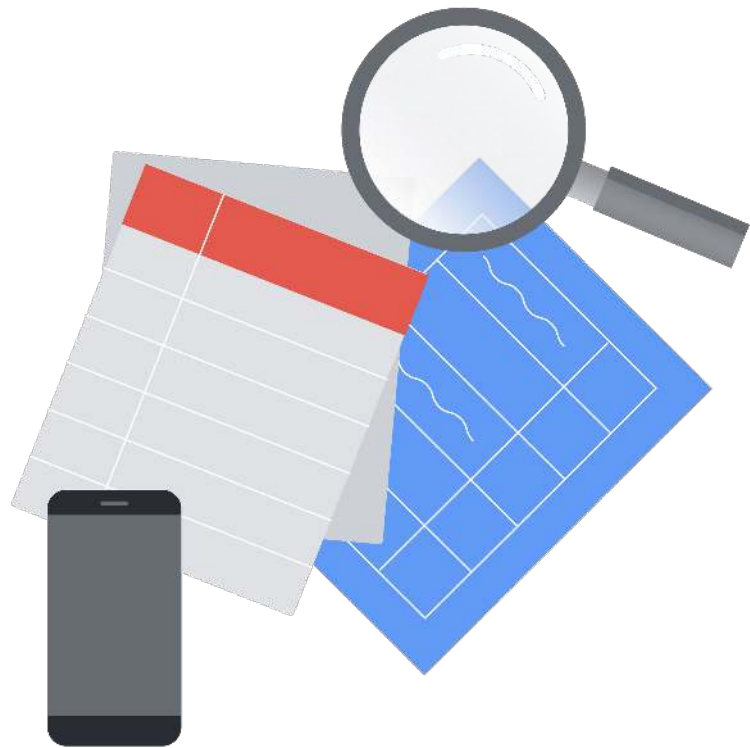
---

22%

lower abandonment rate in **news sites**  
with excellent Core Web Vitals  
measurements

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## Research Study:



“On unfamiliar sites, **2 seconds of delay** was enough to cause most of the drop”

- [\*The Science Behind Web Vitals\*](#)

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## Research Study:

When researchers **increased** visual feedback on buttons **from 100ms to 150ms**, people rated the **quality of the buttons as significantly lower**.



- [The Science Behind Web Vitals](#)

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# Recommended Thresholds

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# Core Web Vitals Thresholds

Core Web Vitals has research-based thresholds for each metric.

## LCP

Largest Contentful Paint



## FID

First Input Delay



## CLS

Cumulative Layout Shift



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75<sup>th</sup>  
percentile






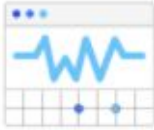
Aim for the 75th percentile of real users to experience good metrics.

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# Measuring Core Web Vitals

# Core Web Vital Tools:

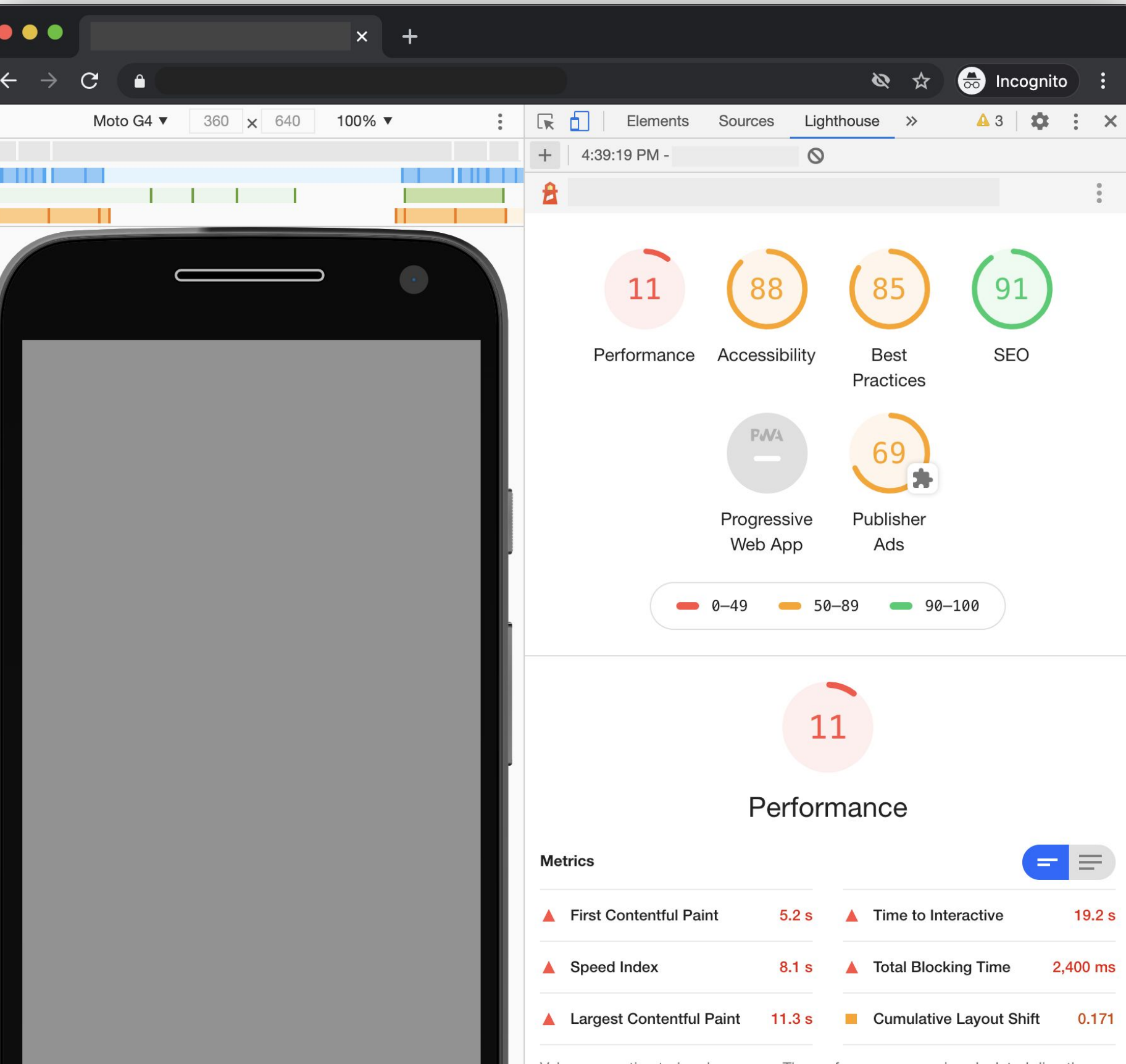
	LCP	FID	CLS
 PageSpeed Insights	✓	✓	✓
 Chrome UX Report <small>Brand new API, BigQuery and Dashboard</small>	✓	✓	✓
 Search Console	✓	✓	✓
 Chrome DevTools	✓	TBT	✓
 Lighthouse	✓	TBT	✓
 Web Vitals Extension	✓	✓	✓

LCP = Largest Contentful Paint, FID = First Input Delay, CLS = Cumulative Layout Shift, TBT = Total Blocking Time

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# Lighthouse

# Lighthouse / Chrome DevTools



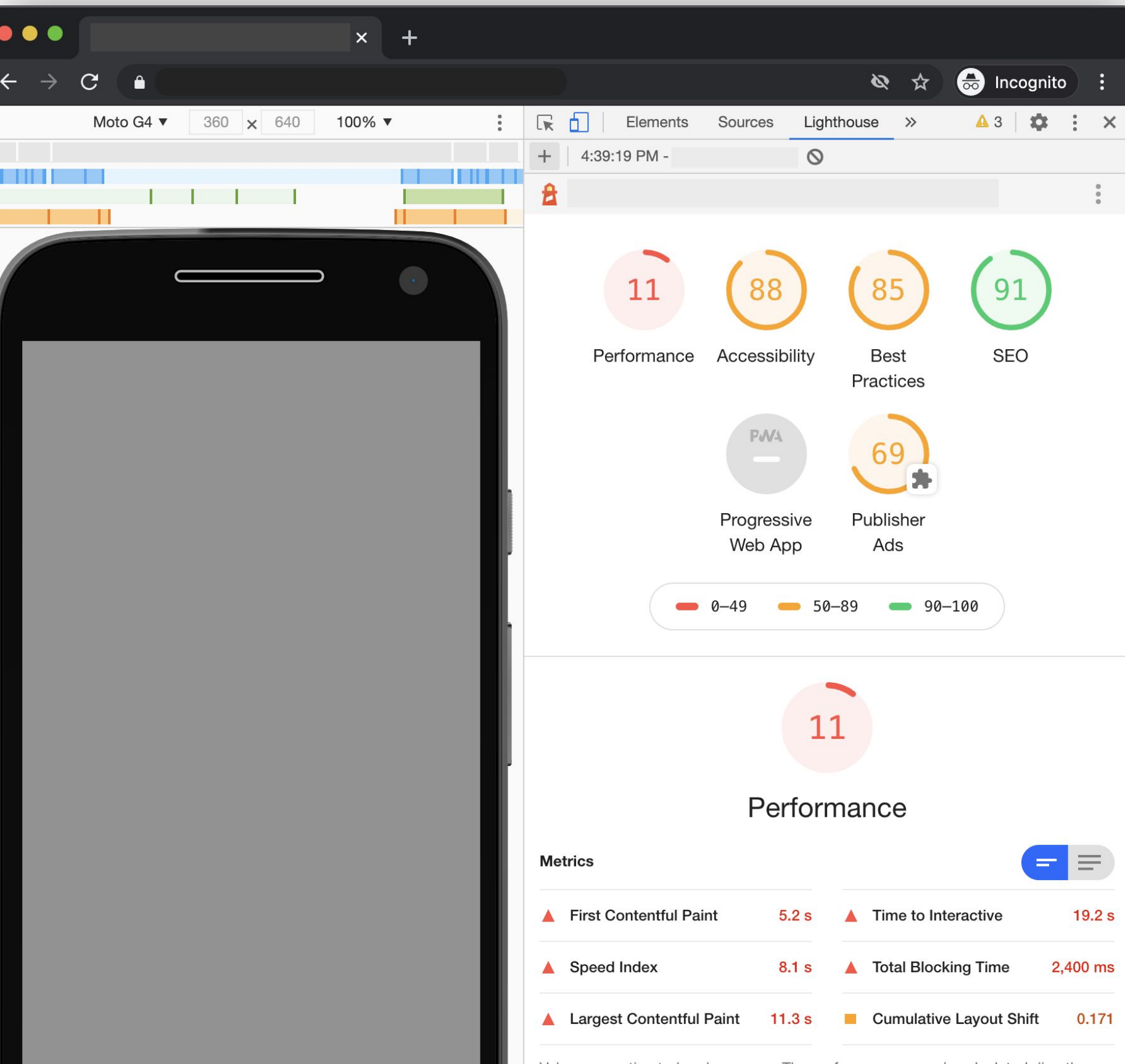
## What is it?

- An automated website auditing tool that provides metrics, opportunities, and diagnostics

## Good for:

- Quick way to test lab view
- Suggestions for improvements
- Integration into other developer tools
- Community Plugins like Publisher Ads provide more insights and suggestions

# Lighthouse / Chrome DevTools

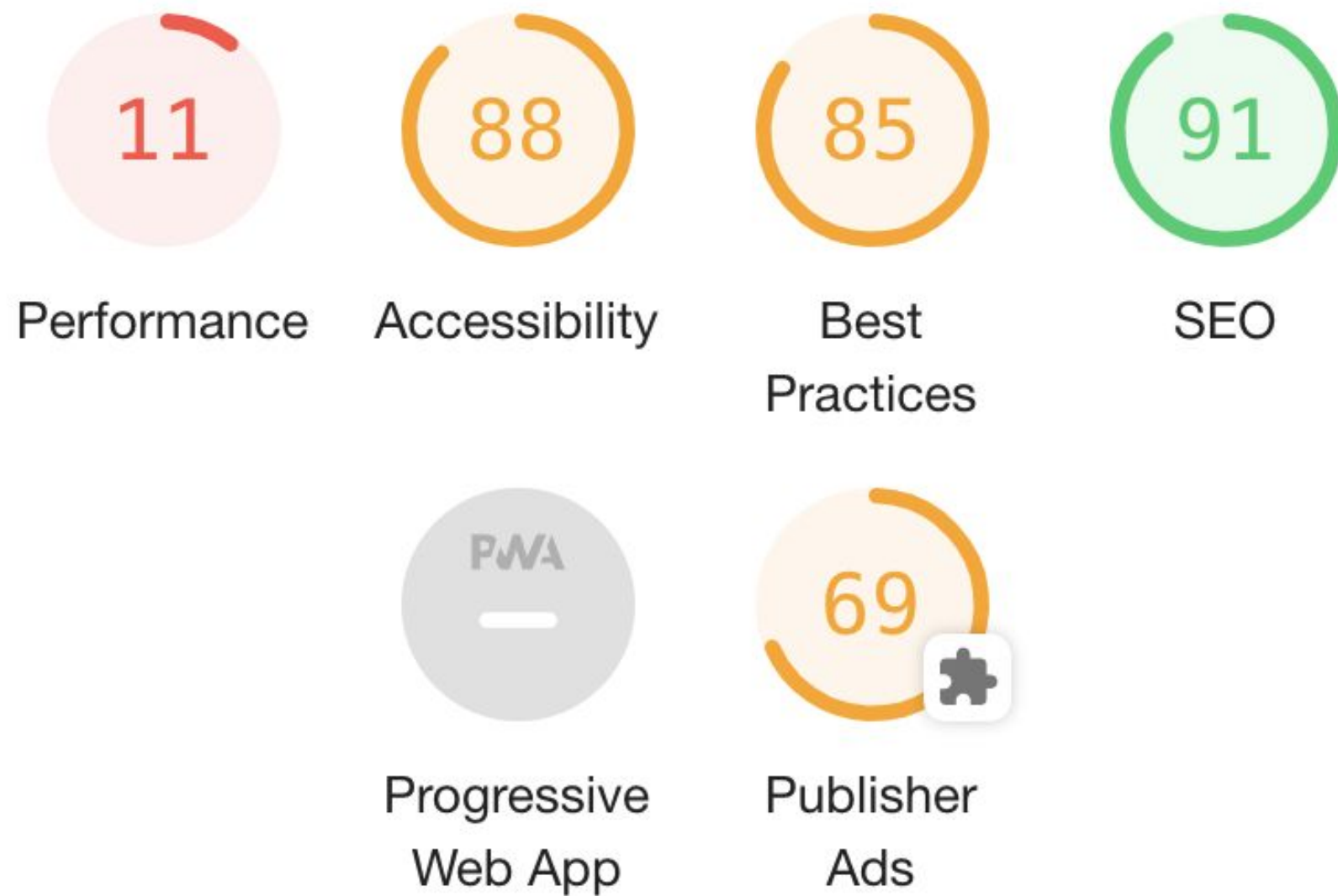


## Tips:

- If running in the browser, use Incognito Mode to keep extensions from affecting the results
- Keep the tab with Lighthouse running in focus and close as many other tabs as possible
- Results will vary on different computers

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# Lighthouse / Chrome DevTools



The top section shows the summary of every section audited in Lighthouse, including plugins.


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# Lighthouse / Chrome DevTools

11

## Performance

### Metrics



▲ First Contentful Paint	5.2 s	▲ Time to Interactive	19.2 s
▲ Speed Index	8.1 s	▲ Total Blocking Time	2,400 ms
▲ Largest Contentful Paint	11.3 s	■ Cumulative Layout Shift	0.171


Values are estimated and may vary. The [performance score is calculated](#) directly from these metrics. [See calculator.](#)

[View Trace](#)

- Includes the Core Web Vitals
  - FID is replaced by Total Blocking Time (TBT)
  - Click “View Trace” to analyze the network and main thread activity
-

# Lighthouse / Chrome DevTools

**Opportunities** — These suggestions can help your page load faster. They don't [directly affect](#) the Performance score.

Opportunity	Estimated Savings
▲ Remove unused JavaScript	 3.87 s ▼
■ Defer offscreen images	 0.15 s ▼

**Diagnostics** — More information about the performance of your application. These numbers don't [directly affect](#) the Performance score.

▲ Largest Contentful Paint element	▼
▲ Avoid large layout shifts	▼
▲ Does not use passive listeners to improve scrolling performance	▼
▲ Avoid <code>document.write()</code>	▼
▲ Avoid an excessive DOM size — 2,739 elements	▼
▲ Minimize main-thread work — 8.9 s	▼
▲ Serve static assets with an efficient cache policy — 44 resources found	▼
▲ Reduce JavaScript execution time — 5.3 s	▼

- The Opportunities and Diagnostics sections offer potential solutions
- Expanding the sections will give more details:

Opportunity	Estimated Savings
▲ Remove unused JavaScript	 3.87 s ^

Remove unused JavaScript to reduce bytes consumed by network activity.

[Learn more.](#)



If you are not server-side rendering, [split your JavaScript bundles](#) with `React.lazy()`. Otherwise, code-split using a third-party library such as [loadable-components](#).

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# Lighthouse / Chrome DevTools



## Publisher Ads

A Lighthouse plugin to improve ad speed and overall quality that is targeted at sites using GPT or AdSense tag. [Learn more](#)

### Metrics

- Reduce tag load time — 8.6 s
- ▲ Reduce time to send the first ad request — 8.8 s

### Ad Speed

- ▲ Avoid bottleneck requests — 5.3 s spent blocked on requests
- ▲ Load ad scripts statically — Load 1 script statically
- ▲ Avoid render-blocking resources — Up to 2.4 s tag load time improvement
- ▲ Avoid long tasks that block ad-related network requests — 1.3 s blocked
- Ad request waterfall — 2 serial resources

Community Plugins (new in 2020) can help customize your Lighthouse audit.

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# Lighthouse / Chrome DevTools

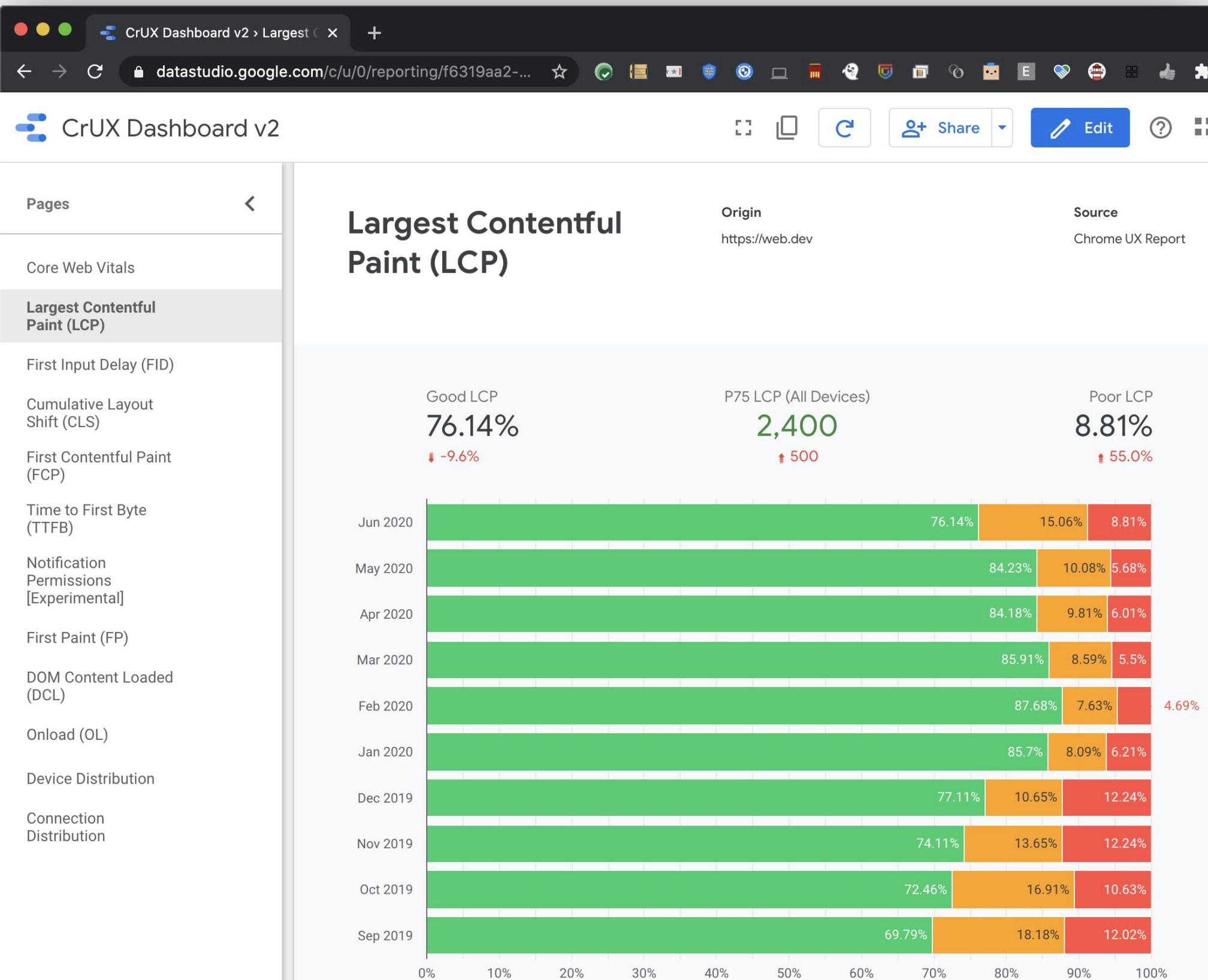
## Resources:

- **Lighthouse documentation:**  
<https://developers.google.com/web/tools/lighthouse/>
  - **Lighthouse Github:**  
<https://github.com/GoogleChrome/lighthouse/>
  - **Chrome DevTools documentation:**  
<https://developers.google.com/web/tools/chrome-devtools/>
-

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# Chrome User Experience Report

# Chrome User Experience Report



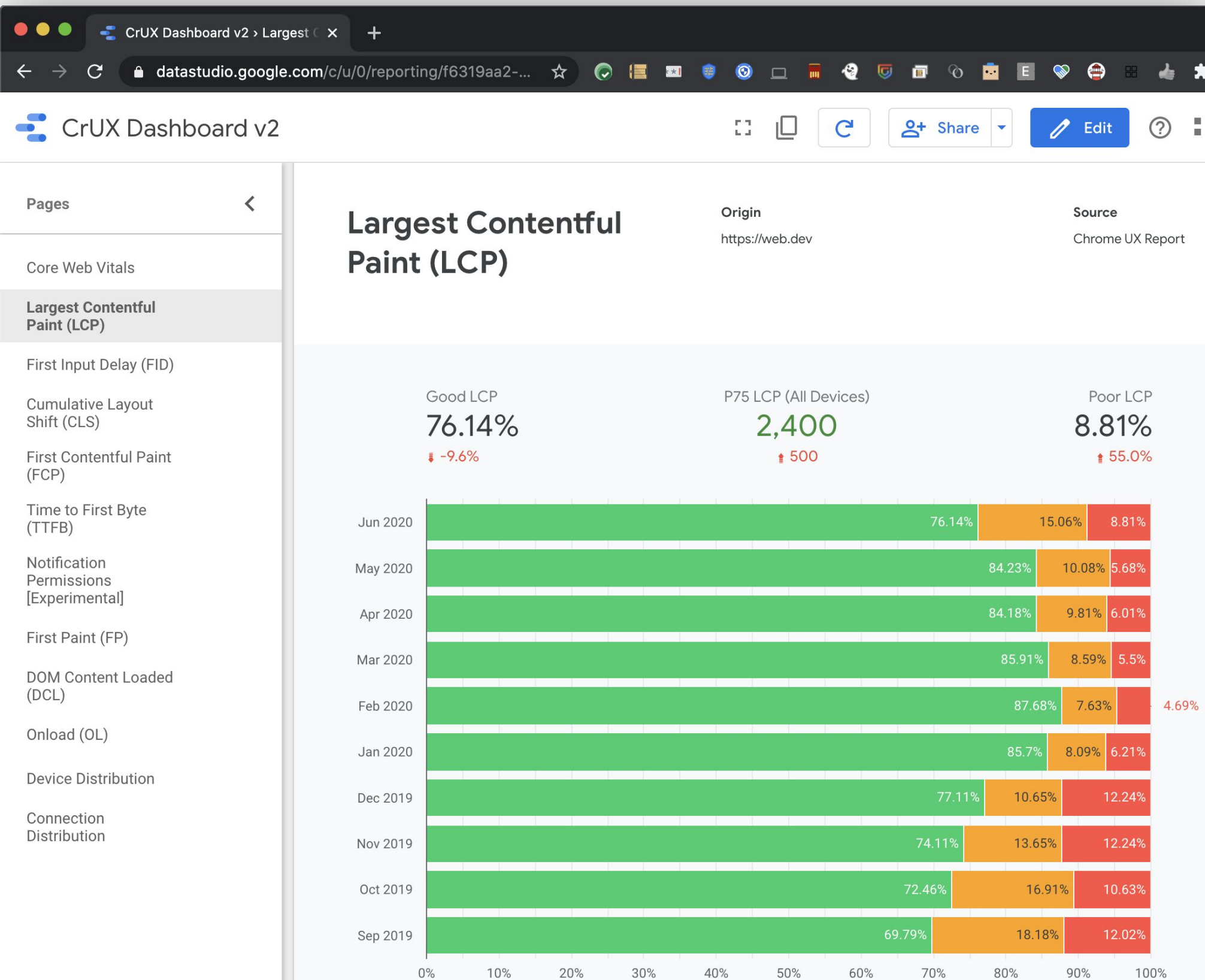
## What is it?

- Public dataset of aggregated real user performance data from opted-in Chrome users
- Data is bucketed in Good, Needs Improvement, and Poor categories

## Good for:

- Viewing real user data trends over time
- Doesn't require any additional tags on your site

# Chrome User Experience Report



## Tips:

- Data is aggregated monthly and at the origin level
- You can filter the data by device
- API allows for querying for the past 28 days
- [Redesigned dashboard](#) helps visualize the data

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# Chrome User Experience Report

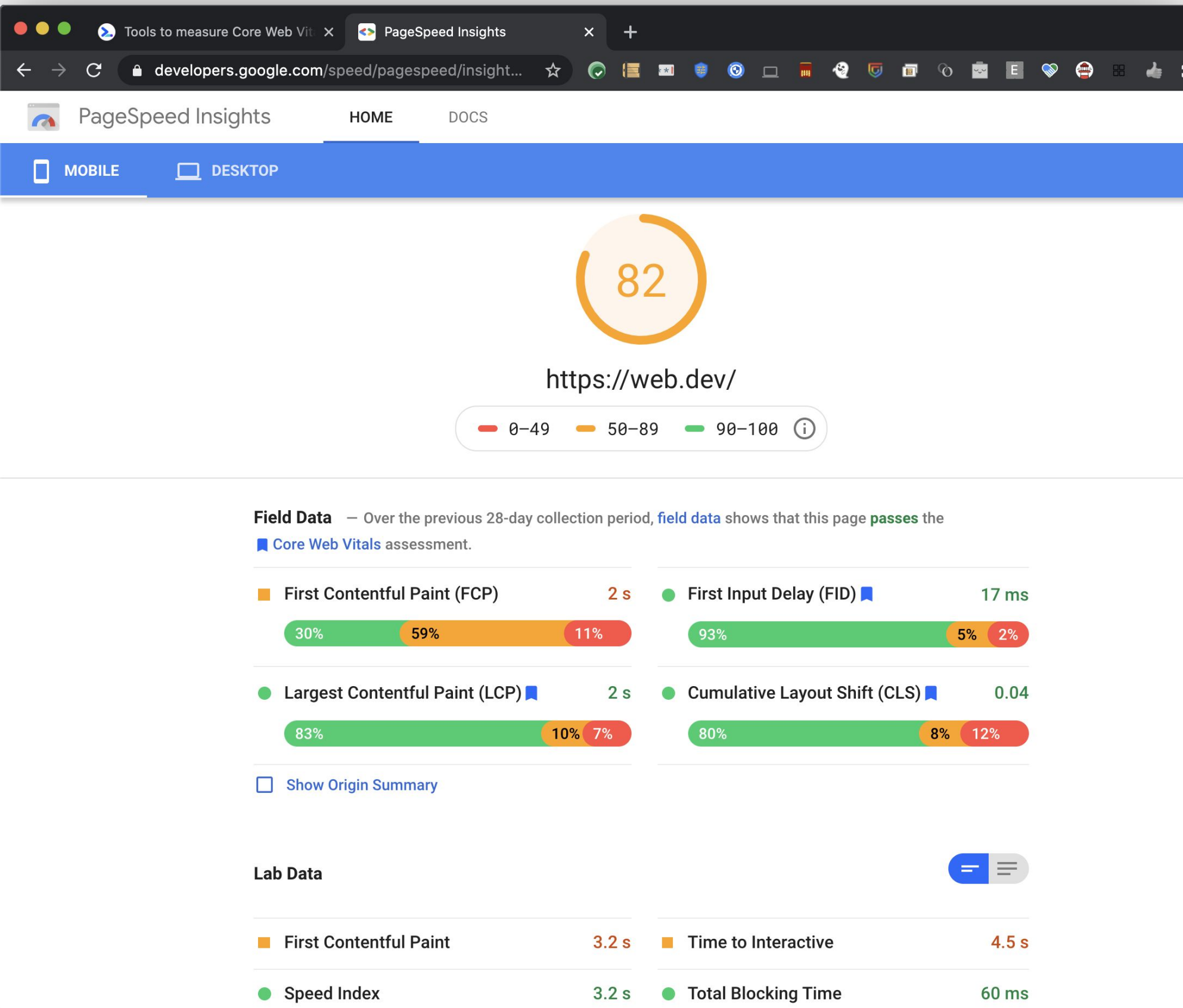
## Resources:

- **Chrome User Experience API:**  
<http://developers.google.com/web/tools/chrome-user-experience-report/api/reference>
  - **Redesigned dashboard:** <http://g.co/chromeuxdash>
  - **Dashboard tutorial:**  
<https://web.dev/chrome-ux-report-data-studio-dashboard>
  - **Advanced API tutorial:**  
<https://www.youtube.com/watch?v=YGcA-h4YM6w&list=PLNYkxOF6rcIDCo-BiwSL52yQ0ngRNozaF>
-

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# Page Speed Insights

# Page Speed Insights



## What is it?

- Combined performance data from Chrome User Experience Report and Lighthouse

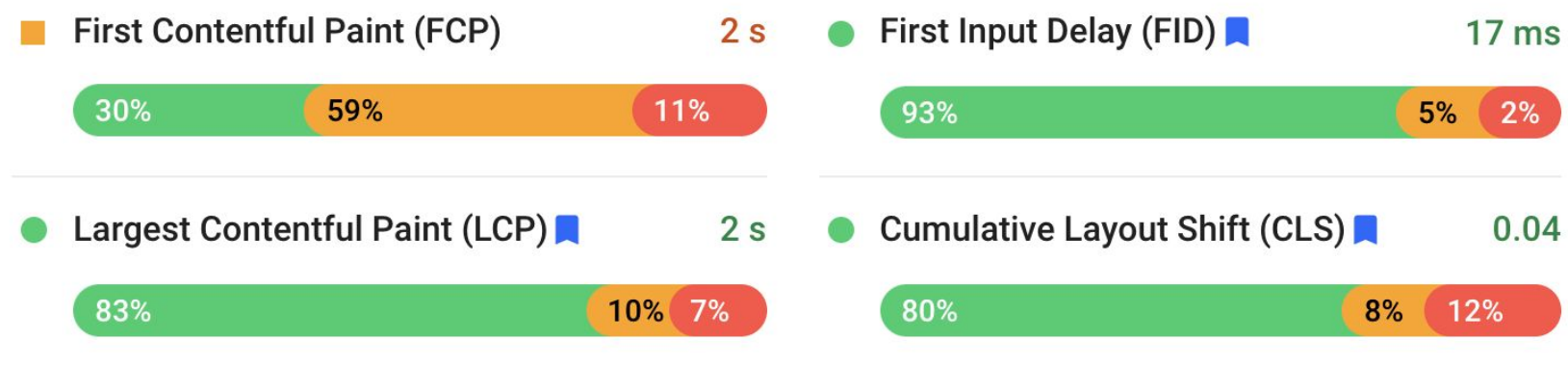
## Good for:

- Comprehensive details of a single URL
- Real User Metrics for the past 28 days
- Performance-focused audits

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# Page Speed Insights

**Field Data** — Over the previous 28-day collection period, [field data](#) shows that this page **passes** the [Core Web Vitals](#) assessment.



[Show Origin Summary](#)

## Field data:

- Field data is from the Chrome User Experience Report
- If there isn't enough data available, the aggregate origin level will be shown
- The Core Web Vitals are marked with

# Page Speed Insights

## Lab Data



■ First Contentful Paint	3.2 s	■ Time to Interactive	4.5 s
● Speed Index	3.2 s	● Total Blocking Time	60 ms
■ Largest Contentful Paint	3.7 s	● Cumulative Layout Shift	0

Values are estimated and may vary. The [performance score is calculated](#) directly from these metrics. [See calculator](#).

## Opportunity

### Estimated Savings

▲ Preload key requests	1.28 s
■ Remove unused JavaScript	0.41 s
■ Remove unused CSS	0.3 s
■ Properly size images	0.15 s

**Diagnostics** — More information about the performance of your application. These numbers don't [directly affect](#) the Performance score.

▲ Ensure text remains visible during webfont load	▼
● Avoid chaining critical requests — 6 chains found	▼

## Lab Data and Opportunities:

- From Lighthouse

## Differences from Lighthouse:

- Runs on dedicated servers
- Only surfaces performance audits
- Available as an API call

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# Page Speed Insights

## Resources:

- **Page Speeds Insights Web Interface:**

<https://developers.google.com/speed/pagespeed/insights/>

- **Page Speed Insights API:**

<https://developers.google.com/speed/docs/insights/v5/get-started>

- **Page Speed Insights documentation:**

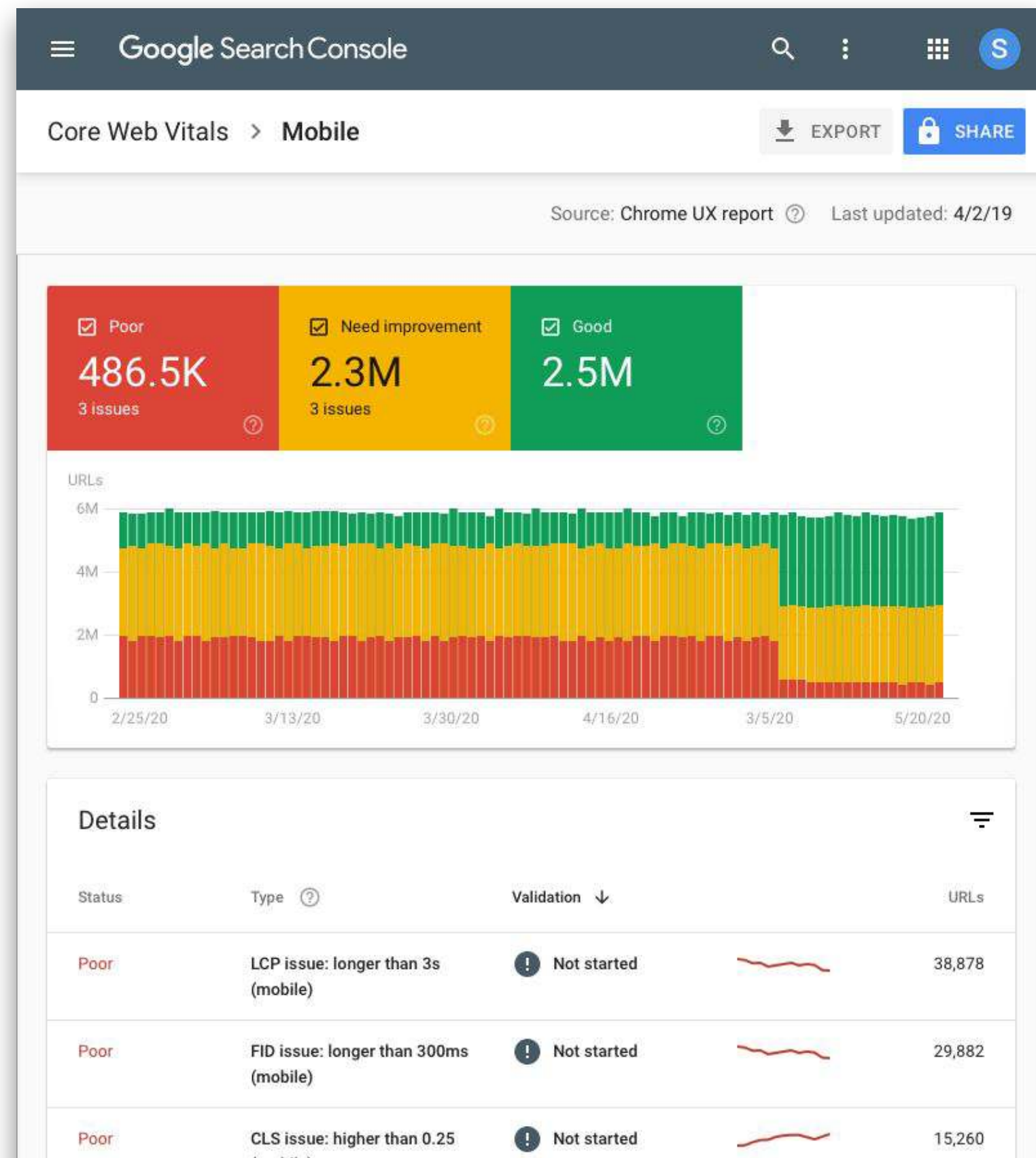
<https://developers.google.com/speed/docs/insights/v5/about>

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# Search Console

# Search Console



## What is it?

- Helps measure your site's Search traffic and performance

## Good for:

- Grouping together pages with similar Core Web Vitals problems
- Helping prioritize Core Web Vitals work
- Viewing Core Web Vitals performance throughout the site

---

# Search Console

## Resources:

- **Google Search Console:**  
<https://search.google.com/search-console/about>
  - **Search Console Training:**  
<https://youtu.be/ONr5Z7VhNFI>
-

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## LCP Resources:

- <https://web.dev/lcp/>
- <https://web.dev/optimize-lcp/>

## FID Resources:

- <https://web.dev/fid/>
- <https://web.dev/optimize-fid/>

## CLS Resources:

- <https://web.dev/cls/>
- <https://web.dev/optimize-cls/>

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# Additional Resources:

- Core Web Vitals Announcement: <https://web.dev/vitals/>
- Core Web Vitals Tools Overview: <https://web.dev/vitals-tools/>
- Science behind Core Web Vitals: <https://blog.chromium.org/2020/05/the-science-behind-web-vitals.html>
- How AMP helps with Core Web Vitals: <https://blog.amp.dev/2020/05/06/amp-web-vitals-a-better-web-together/>
- Latest advice and talks at: <https://web.dev>

# Team up with a Google Certified Publishing Partner

Leverage the Extra Support

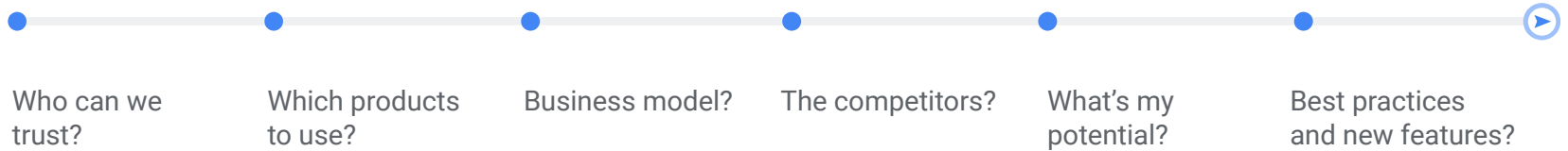


Bianca Jochimsen - Head of GCPP



# The Current Ecosystem

# In 2021, publishers seek a clearer path through the highly ambiguous ecosystem



# The Need for Support

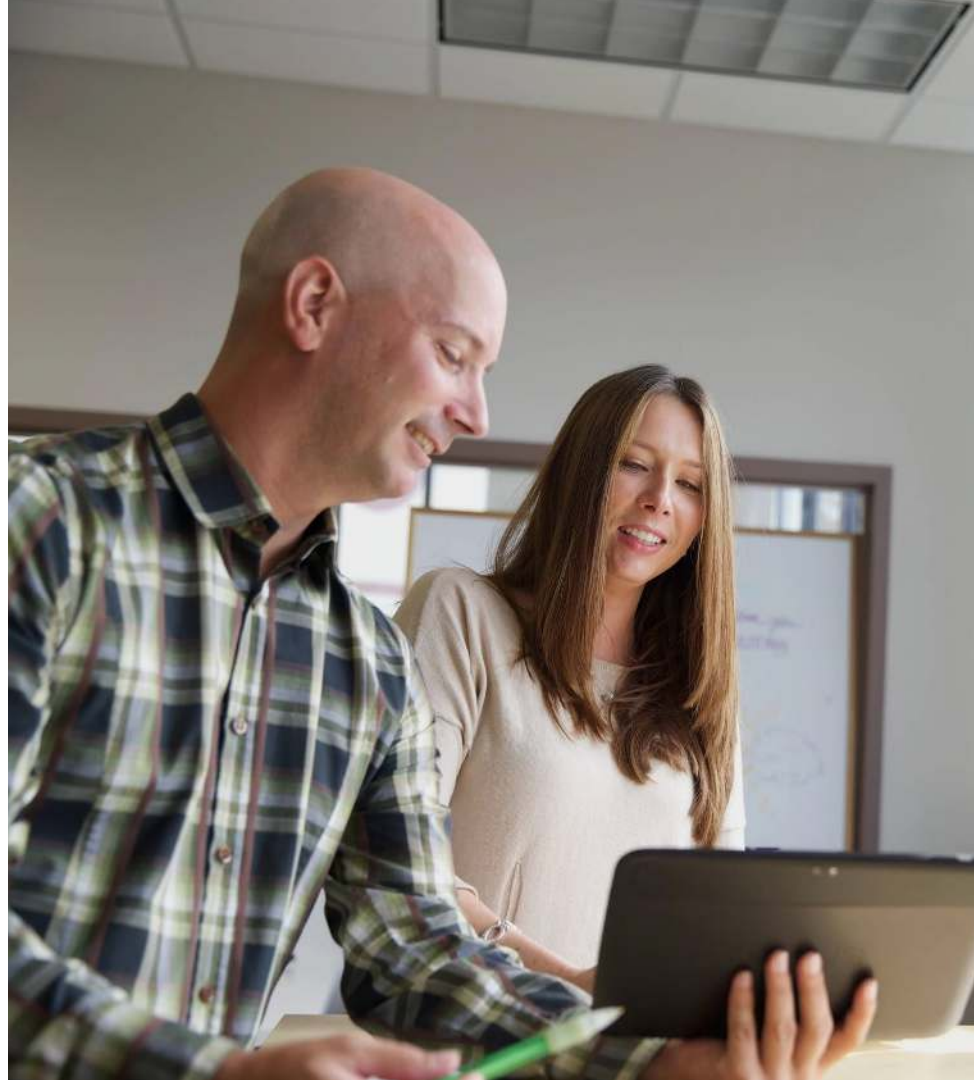
**Many publishers desire additional support** so that they can focus on doing what they truly enjoy, such as publishing amazing content on their site.

Advertisers, Publishers and Google work toward the common goal of **sustaining a high quality network** within a dynamic environment.



# What is a Google Certified Publishing Partner?

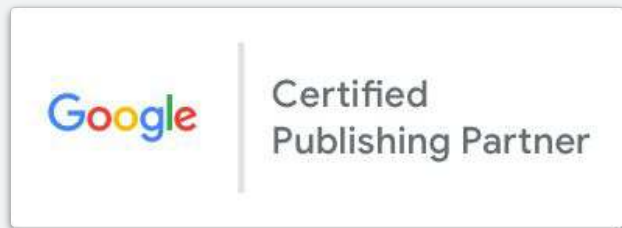
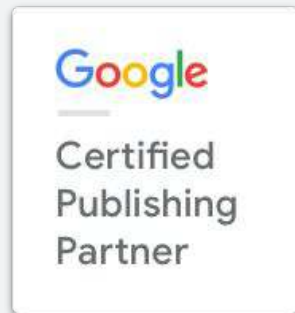
A Google Certified Publishing Partner is a company that we've reviewed and has proven be an **expert using Google products and provides publishers with innovative solutions and services.**



# Look for the Badge

The Certified Publishing Partner badge assures that you're working with a partner who's been carefully evaluated by Google. It's a guarantee that the partner is a **trained expert on AdSense, Ad Manager, or AdMob**.

All partners are **required to maintain their certifications** by passing updated product exams and other requirements every year.



Why should you consider  
working with a GCPP?

# Benefits of working together



Rely on your Partner's **expertise to set up and optimize your digital content** so you can attract the most profitable and relevant advertising.



From app design to ad optimization, **receive insights, services, and technology** to help you make more informed decisions and strengthen your bottom line.



As your partner leverages the best advertising technologies **to maximize your revenue potential** you'll have more time for what matters most: creating quality content!

# The impact of working with Google<sup>1</sup>

95%

of Publishers say their **Google Certified Publishing Partner** is important to their business success

84%

of Publishers are **very satisfied, overall** with their **Google Certified Publishing Partner**

73%

of Publishers count on their **Google Certified Publishing Partner** for all sales support