PREPARING FOR THE CORE WEB VITALS UPDATE

CHEAT SHEET

CLS

Cumulative Layout Shift is the sum of all individual layout shift scores for all unexpected layout shifts that occur during a page load. If text moves on a page without warning, or you are about to click on an element and the element moves, that is a bad CLS. Sites should strive to have a CLS score of less than 0.1. Layout shift score = impact fraction * distance fraction: The impact fraction measures how unstable elements impact the viewport area between two frames. The distance fraction measures the distance that unstable elements have moved, relative to the viewport.
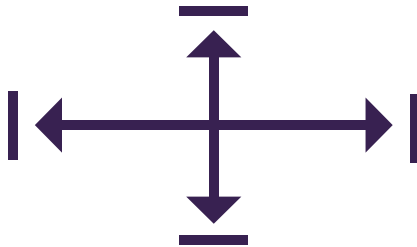
(Visual Stability)

CLS
Cumulative Layout Shift

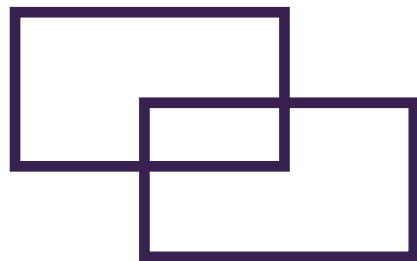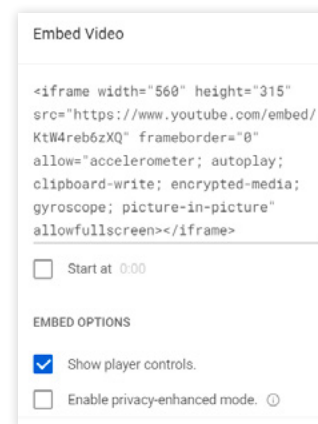| GOOD	NEEDS IMPROVEMENT	POOR
	0.1	0.25

SOME WAYS TO OPTIMISE FOR CLS

Last minute image sizing is one of the main causes of poor CLS, so always include width and height attributes on your images and video elements. You can also reserve the required space using CSS aspect ratio boxes - this ensures the browser can allocate the correct space in the document while the image is loading.

Anyone who has used the web will be aware of layout shifts that cause unwanted ad clicks, but not only is this poor UX, it will also impact your CLS score. However, if sites load the container prior to the ad insert, you can ensure that the impact on the user is minimised.

CLS = 0.44   CLS = 0

Font loading can also cause poor CLS scores. As such, sites should ensure that they are, wherever possible (and it should be in most places) use a combination of <link rel="preload"> and font display: optional to preload fonts and avoid content shifting.

Embed Video

```
<iframe width="560" height="315"
src="https://www.youtube.com/embed/
KtW4reb6zXQ" frameborder="0"
allow="accelerometer; autoplay;
clipboard-write; encrypted-media;
gyroscope; picture-in-picture"
allowfullscreen></iframe>
```

☐ Start at 0:00

EMBED OPTIONS

☑ Show player controls.

☐ Enable privacy-enhanced mode. ⓘ

Use iframes for rich media - just as with ads and images, it's important to ensure that the space is blocked out in advance to avoid the layout shift that can come as a player resizes.

FID

First Input Delay measures the time from when a user can first interact with a page (when they can click a link, tap a button or use a custom, JavaScript-powered control) to the time when the browser is able to respond to that interaction. Sites should strive to have a First Input Delay of less than 100 milliseconds.
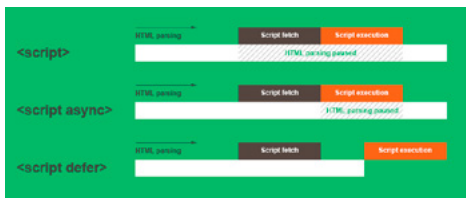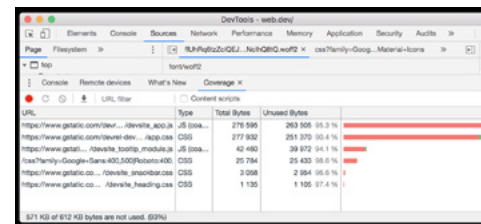
(Interactivity)

FID
First Input Delay

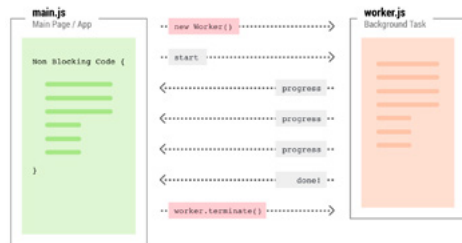| GOOD	NEEDS IMPROVEMENT	POOR

100 ms   300 ms

SOME WAYS TO OPTIMISE FOR FID

As with LCP, for those pages with JS that is required but not critical to the user interaction with the page, you can again use defer to postpone the loading of these sections until when they're required.

Main thread blocking causes input delay, so web workers make it possible to run JavaScript on a background thread. Moving non-UI operations to a separate worker thread can cut down main thread blocking time and consequently improve FID.

Consider using the following libraries to make it easier to use web workers on your site:

- Comlink: A helper library that abstracts postMessage and makes it easier to use
- Workway: A general purpose web worker exporter
- Workerize: Move a module into a web worker

Often sites will include the JavaScript libraries used throughout the site in a single

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LCP

Largest Contentful Paint measures when the largest elements in the viewport become visible. It is used to determine when the main content of a page has finished rendering. Sites should strive to have Largest Contentful Paint occur within the first 2.5 seconds of the page starting to load. This includes the following:

- An element with a background image loaded via the url() function (as opposed to a CSS gradient)

- Block-level elements containing text nodes or other inline-level text elements children

- <img> elements

- <image> elements inside an <svg> element

- <video> elements (the poster image is used)

- <video> elements (the poster image is used)
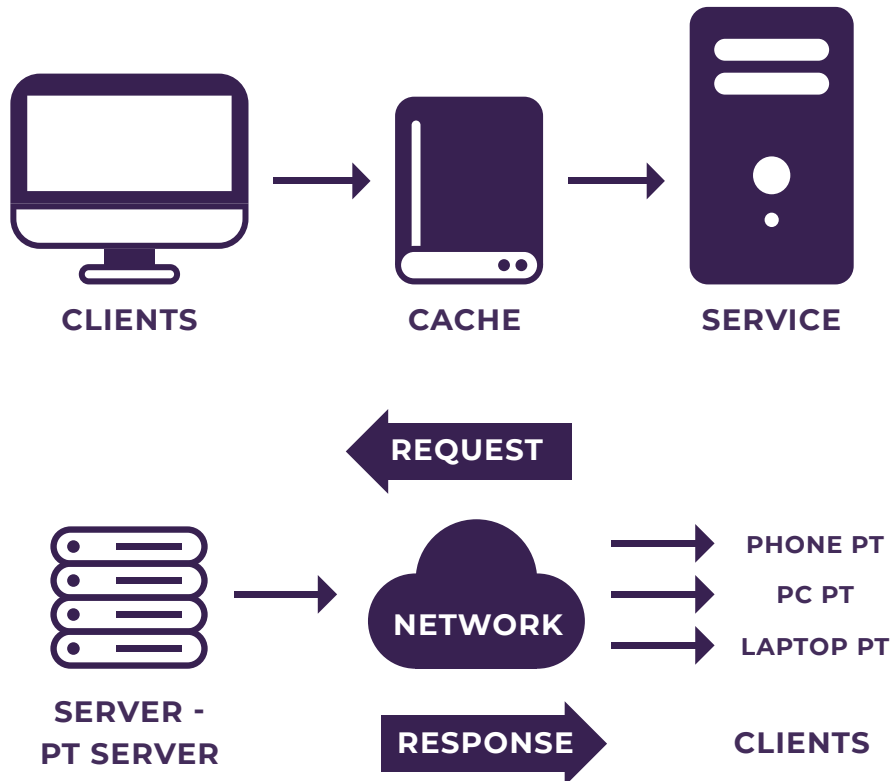
(Loading)

LCP
Largest Contentful Paint

GOOD	NEEDS IMPROVEMENT	POOR

2.5 sec   4.0 sec

SOME WAYS TO OPTIMISE FOR LCP

CLIENTS → CACHE → SERVICE

REQUEST

SERVER - PT SERVER → NETWORK → PHONE PT / PC PT / LAPTOP PT

RESPONSE → CLIENTS

```
<link rel="dns-prefetch" href="https://example.com">
```

```
<link rel="preconnect" href="https://example.com">
```

Your LCP depends largely on the amount of time your user's client (browser) spends making and receiving requests from your server. You can minimise this time in a number of ways.

One way you can reduce this time is to preconnect or prefetch your third party requests. These are two similar, but different ways you can do this - and you can use both to offer fallbacks for browsers which don't support one or the other.

In the before times, the pastos - history people – used to have Christmas tree lights on a single circuit, which meant that if one bulb blew, the entire string of lights would stop. This is the way many sites deploy their JavaScript and CSS - with each execution waiting for the completion of the last. You can minify both JS and CSS, inline critical CSS requests and load JavaScript asynchronously to avoid slowing down or stopping the loading process.

If your site doesn't change with every request, caching can prevent it being recreated unnecessarily every time it is accessed. You can store a copy of the generated HTML on a disk, and server-side caching can reduce TTFB and minimise resource use.

Images are often a large drain on the largest contentful paint, so the Google dev site offers the following advice:

- Consider not using the image at all – if it isn't relevant, remove it.

- Compress images (with imagemin or Squoosh, for example)

- Convert images to next-gen formats (JPEG 2000, JPEG XR, or WebP)

- Use responsive images

- Consider using a CDN

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ABOUT US

Click Consult is a multi award-winning digital and search marketing agency with a focus on organic (SEO) and paid search (PPC). Part of global consumer brand business Ceuta Group, we have a team of 70-plus specialists and a portfolio of more than 60 clients worldwide.
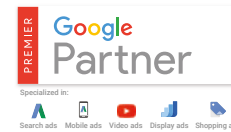
Our complementary services include content marketing, outreach, social media, conversion rate optimisation (CRO) and international/multilingual search marketing. We can also offer training and consultation to support your teams or existing strategy.

Click was named both SEO Agency of the Year and Organic Search (SEO) Team of the Year 2020; ranks within Econsultancy's 'Top 100 Digital Agencies', and Prolific North's 'Top 50 Digital Agencies'. We're also a Google Premier Partner, and a Microsoft Advertising Select Agency Partner.
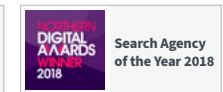
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UK Agency Awards 2020 WINNER	SEO Agency of the Year 2020	The Drum Search Awards Winners	Organic Search (SEO) Team of the Year 2020	UK DIGITAL AWARDS 2019	SEO Agency of the Year 2019	DIGITAL AWARDS WINNER 2018	Search Agency of the Year 2018

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