



SPEEDIMIZE.IO

PAGESPEED

How improve the score of PageSpeed?





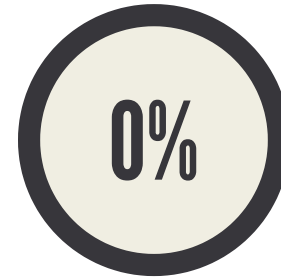
What is that?

GOOGLE + LightHouse = PageSpeed Insights

Lighthouse measures performance, accessibility, SEO for the sites and web apps.

Gives advice.





WHY SUCH RESULTS IF THE SITE VISUALLY LOADED "ALMOST IMMEDIATELY"?

- **Network emulation (network throttling).**
- **Device emulation (CPU throttling).**
- **Site response time, responsiveness.**

HOW
PAGESPEED
IS
CALCULATED

$\text{FCP score} * 0.15 +$
 $\text{SI score} * 0.15 +$
 $\text{LCP score} * 0.25 +$
 $\text{TTI score} * 0.15 +$
 $\text{TBT score} * 0.25 +$
 $\text{CLS score} * 0.05$

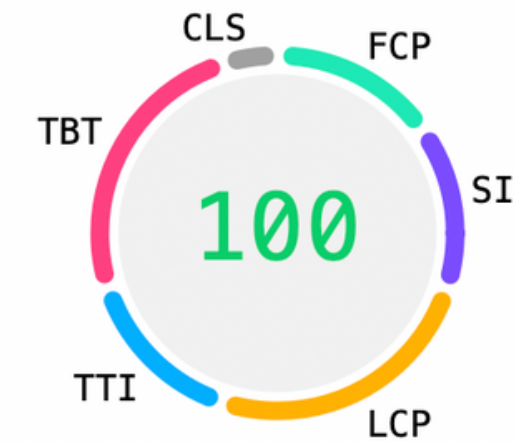
PageSpeed Calculator

🚧 Lighthouse Scoring Calculator

Device type: Versions:

latest
[v6, v7](#)

	Value	Metric Score	Weighting
● FCP (First Contentful Paint)	<input type="range" value="0 ms"/> 0 ms	<input type="range" value="100"/> 100	15%
● SI (Speed Index)	<input type="range" value="0 ms"/> 0 ms	<input type="range" value="100"/> 100	15%
● LCP (Largest Contentful Paint)	<input type="range" value="0 ms"/> 0 ms	<input type="range" value="100"/> 100	25%
● TTI (Time to Interactive)	<input type="range" value="0 ms"/> 0 ms	<input type="range" value="100"/> 100	15%
● TBT (Total Blocking Time)	<input type="range" value="0 ms"/> 0 ms	<input type="range" value="100"/> 100	25%
● CLS (Cumulative Layout Shift)	<input type="range" value="0,00"/> 0,00	<input type="range" value="100"/> 100	5%



Learn more about scoring at web.dev/performance-scoring.

► Scores under 5/100 are not supported by this UI. Why?



How improve PageSpeed?

Work with the most significant indicators

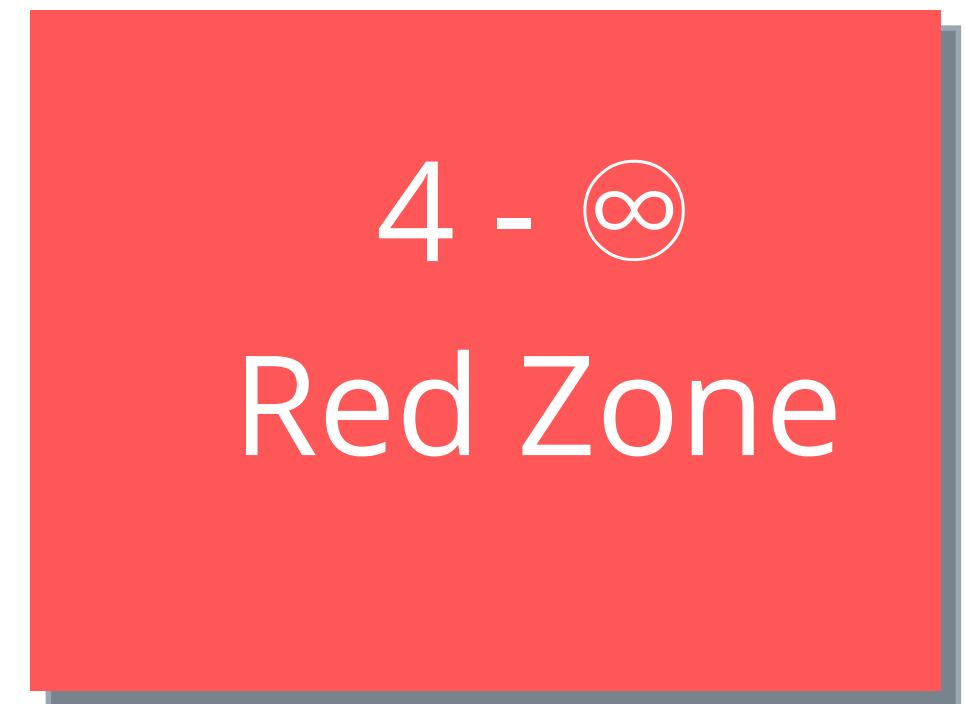
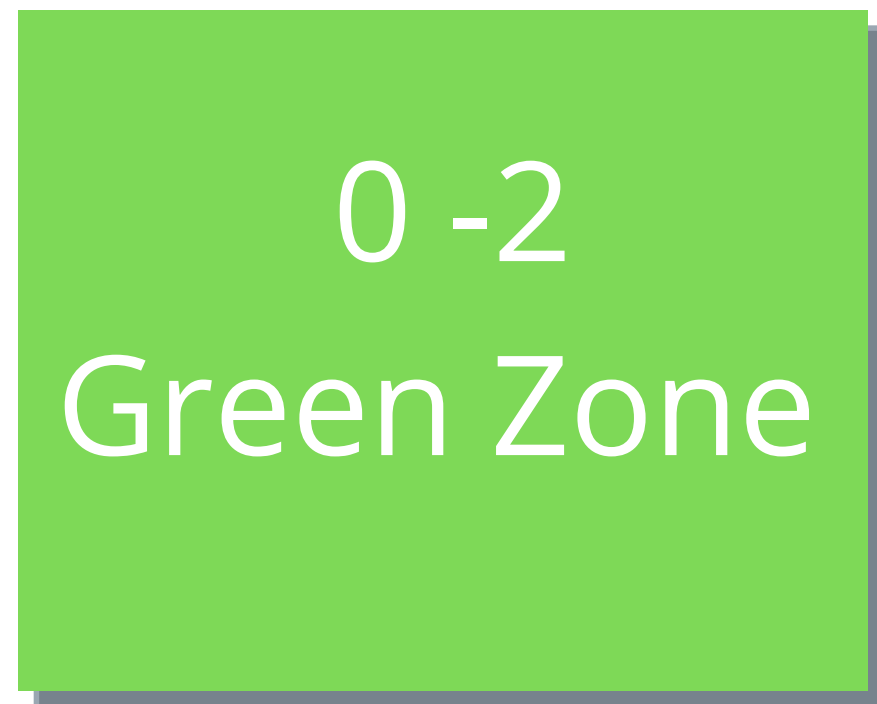
Optimizing TBT + LCP will give more effect



FCP what is that?

The time between server response and first content appearing

The server response is not included in this metric. Before FCP, the site visitor will see a white screen. Measured in seconds.



HOW TO IMPROVE FCP

Remove anything blocking rendering

1. If styles <100kb - inline.
2. Exclude JS execution when rendering.

TTI?

Time to interaction is the time after which the page is fully ready for user interaction.

Until this time, interaction with the page can be difficult (scroll lags, buttons do not work). In seconds.

0 - 3.8
Green Zone

3.9 - 7.3
Yellow Zone

7.4 - ∞
Red Zone

HOW TO IMPROVE TTI

1. Postpone third-party scripts.
2. iframe content is postponed or discarded.
3. Own scripts - we optimize and divide the execution into stages.
 4. We refuse from heavy libraries.

SPEED INDEX?

The Load Speed Index shows how quickly content appears on a page.

(FCP, LCP, FMP)

How quickly the content of the first screen of your site loads when rendered in a browser. In seconds.

0 - 4.3

Green Zone

4.4 - 5.8

Yellow Zone

5.9 - ∞

Red Zone

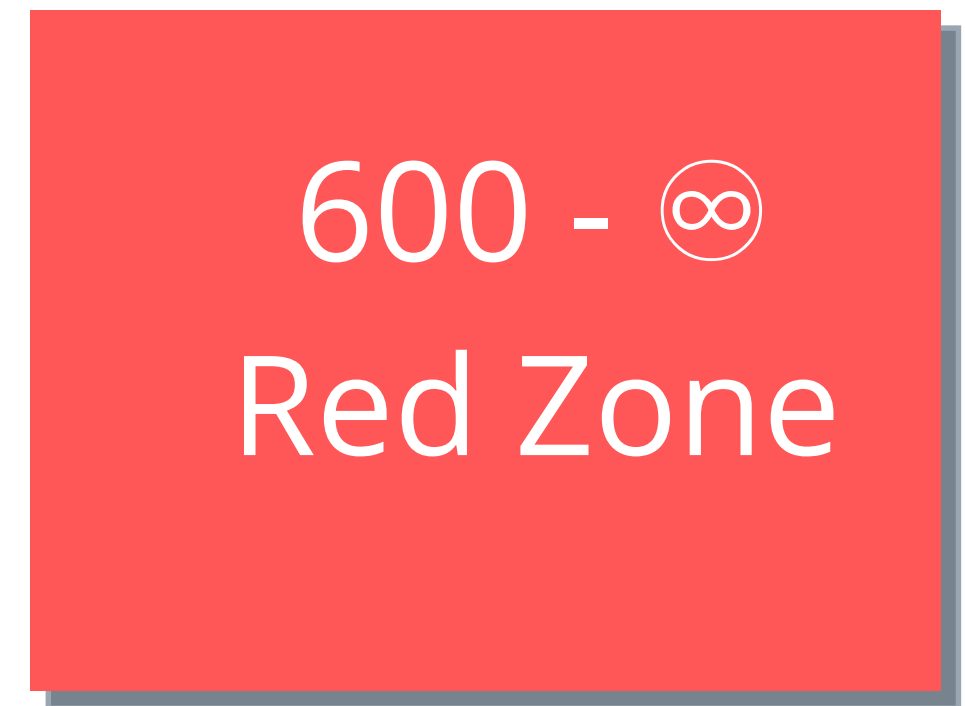
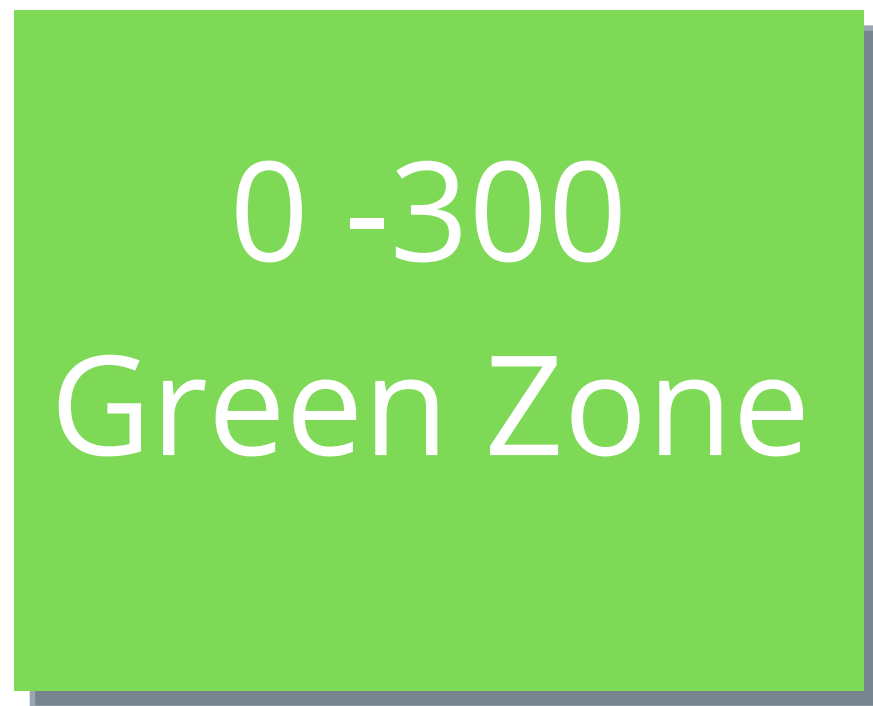
HOW TO IMPROVE SPEED INDEX

Improve the previous elements and the speed index will
be better

TBT?

The total blocking time of the main thread in milliseconds. Cumulative time of all tasks from FCP to TTI that ran for more than 50ms.

Shows the total load of the main thread. This includes styling and rendering and executing JS.
In seconds.



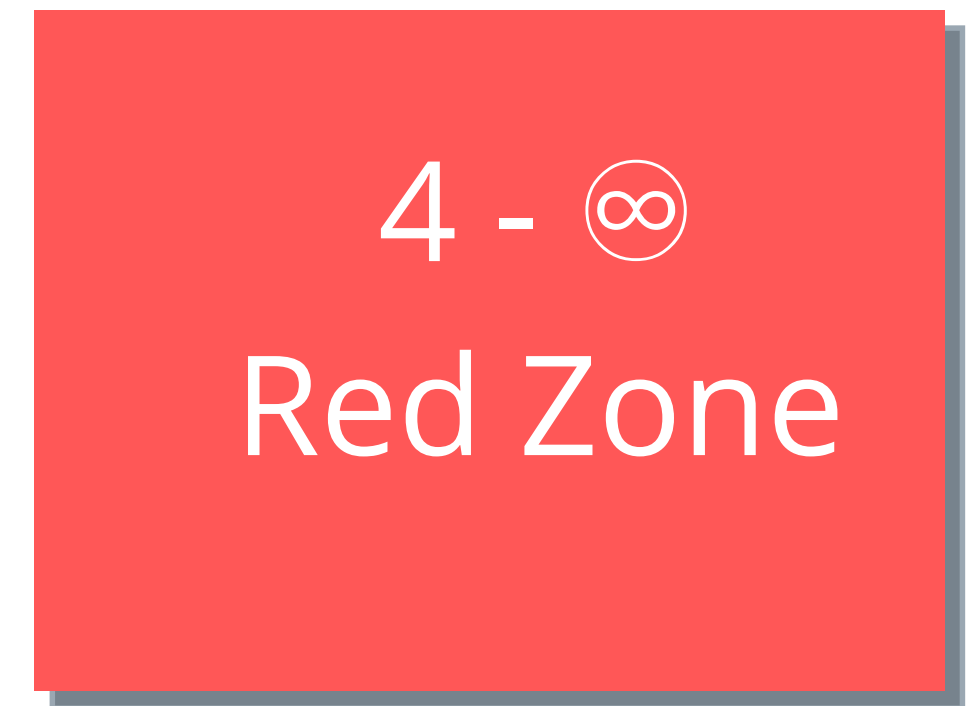
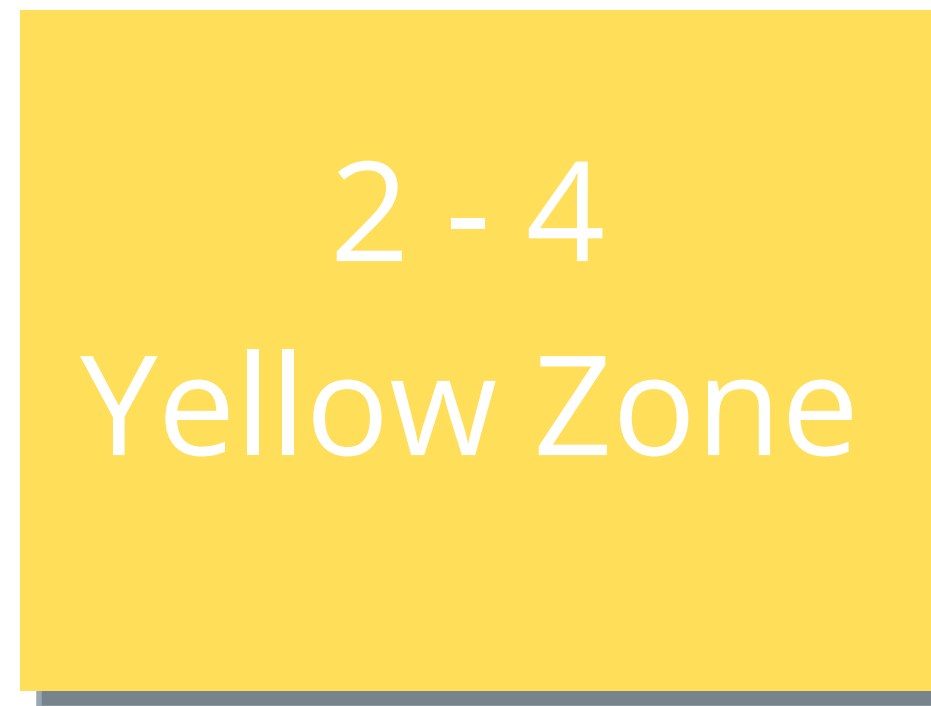
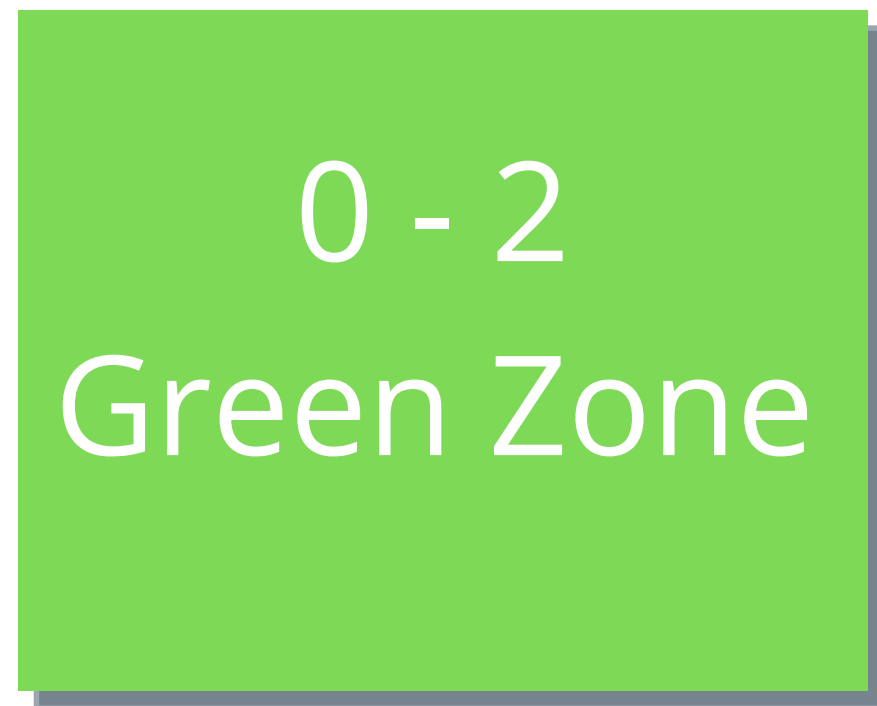
HOW TO IMPROVE TBT

1. Split the execution of JS into small tasks.
 2. Optimizing the long task.
3. Postpone the functionality that is not needed for rendering.

LCP?

Large content rendering is the time after which the large content of the first screen of your page is rendered. It can be an image or text.

Until that time, the first screen of your site has not yet been fully rendered to the user.



HOW TO IMPROVE LCP

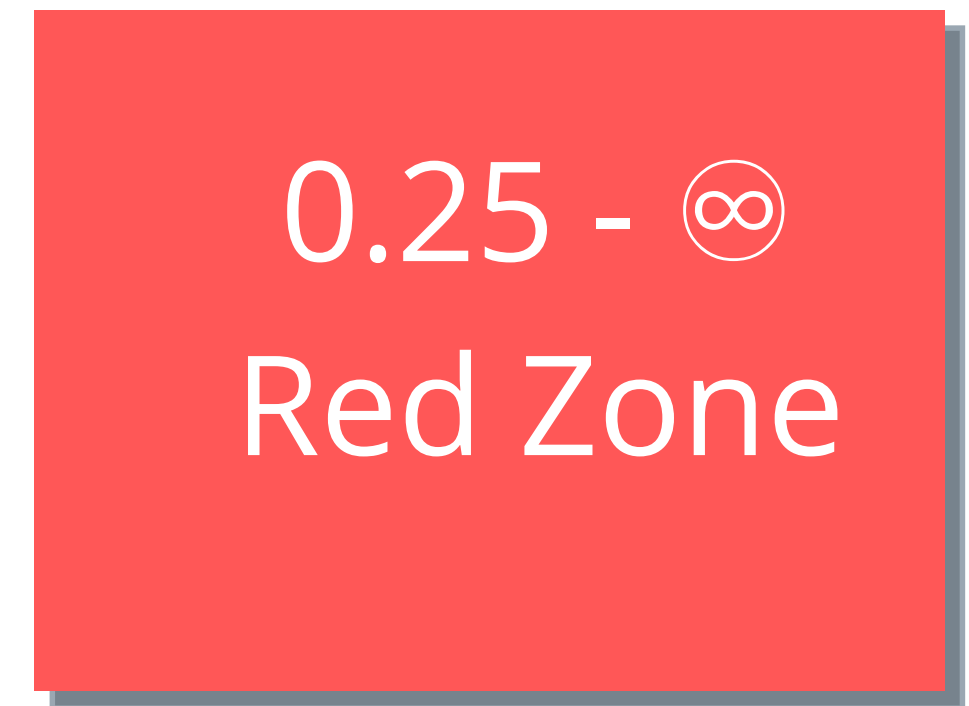
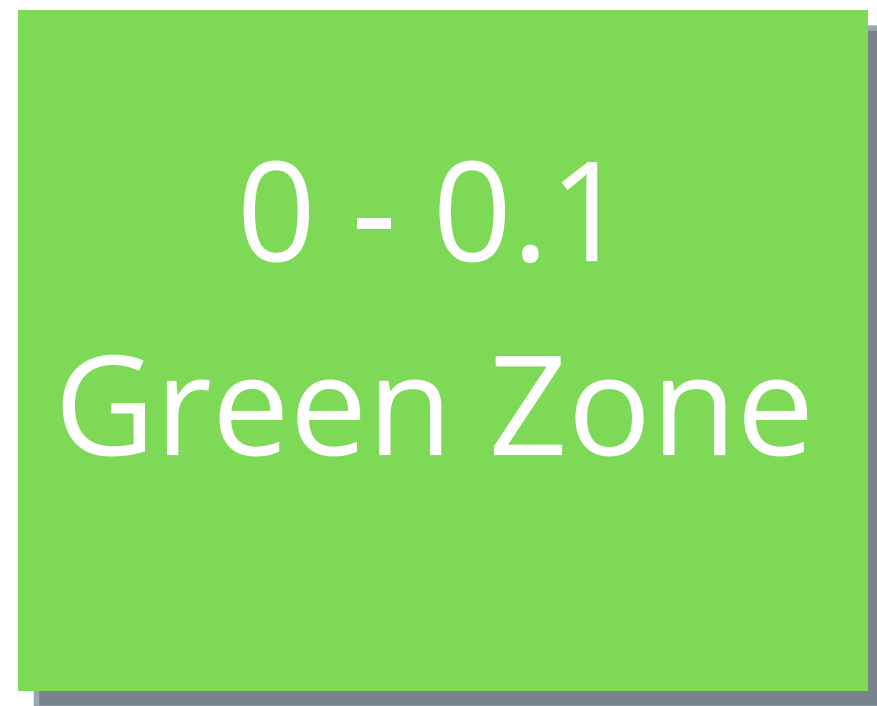
First, need to understand which LCP element

1. If there is a picture, check that it is not postponed.
 2. If the picture is added to the preload.
 3. If text - add fonts to the preload.
 4. If the text - add HTTP / 2 Push.

CLS?

Percentage of the offset of the element on the page during loading.

Elements may shift due to loading of images, fonts, ad units.



HOW TO IMPROVE CLS

Simply reserve a place

SITE

speedimize.io

EMAIL

hello@speedimize.io

Let's talk!