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| --- | --- | --- | --- |
| **Metric** | **Optimal** | **Acceptable** | **Needs Improvement** |
| **Largest Contentful Paint (LCP)** | Under 2.5s | Under 4s (still acceptable) | Over 4s (needs improvement) |
| **Cumulative Layout Shift (CLS)** | Below 0.1 | Under 0.25 (still acceptable) | Over 0.25 (needs improvement) |
| **Interaction to Next Paint (INP)** | Under 200ms | 200ms - 500ms (improvement needed) | Over 500ms (critical improvement needed) |
| **Time to First Byte (TTFB)** | Under 200ms | 200ms - 800ms (acceptable, but improvable) | Over 800ms (needs significant improvement) |
| **First Contentful Paint (FCP)** | Under 1.8s | 1.8s - 3s (acceptable, improvement suggested) | Over 3s (needs significant improvement) |
| **Total Blocking Time (TBT)** | Under 200ms | 200ms - 500ms (acceptable, improvement needed) | Over 500ms (critical improvement needed) |

### **Definitions and Impact:**

1. **Largest Contentful Paint (LCP)**
   1. **Definition:** Time it takes for the largest visible content element (usually image or block of text) to load.
   2. **User Impact:** A fast LCP means users can see the main content quickly, improving the experience. A slow LCP leads to frustration and users might leave before it finishes loading.
2. **Cumulative Layout Shift (CLS)**
   1. **Definition:** Measures visual stability by tracking unexpected shifts in content during page loading.
   2. **User Impact:** High CLS can be disorienting, causing users to click on the wrong elements. A low CLS ensures smooth, predictable page layout.
3. **Interaction to Next Paint (INP)**
   1. **Definition:** Measures responsiveness by evaluating the time between user interaction and the next visual change on the page.
   2. **User Impact:** Delays in INP lead to a sluggish experience, while a fast INP makes the page feel more responsive and pleasant.
4. **Time to First Byte (TTFB)**
   1. **Definition:** Time taken by the browser to receive the first byte of data from the server after a request is made.
   2. **User Impact:** A high TTFB results in delays before the page starts to load, negatively impacting user experience, particularly in regions with higher network latency.
5. **First Contentful Paint (FCP)**
   1. **Definition:** Measures how long it takes for the first piece of content (text, image) to appear on the screen after loading starts.
   2. **User Impact:** Faster FCP means users start seeing content quickly, improving their perception of the site’s speed. Slow FCP makes users feel like the site is lagging.
6. **Total Blocking Time (TBT)**
   1. **Definition:** Total time during which the main thread is blocked, preventing user interactions like clicking or typing.
   2. **User Impact:** High TBT makes the site feel unresponsive. Reducing TBT ensures a smooth interaction experience, where users don’t experience delays when engaging with the page.

This restructured format allows for an easier comparison and clearer understanding of the metrics and their impact on user experience.