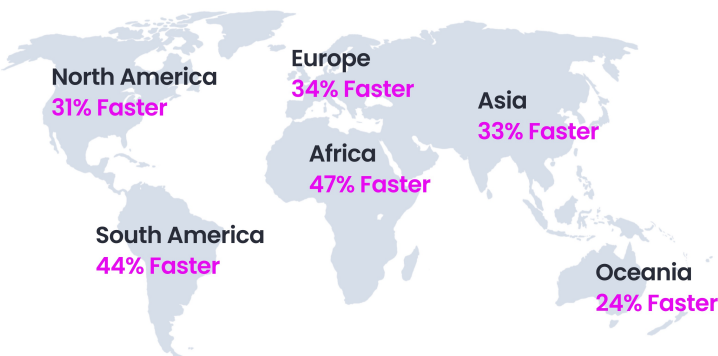## Challenge

Bayerische Motoren Werke AG (BMW) is one of the largest premium car manufacturers globally. Offering speed, agility and a premium experience with the help of innovation, which is at the very core of BMW's identity. However, providing a superb user experience on the web with fast loading times across a multitude of countries is a huge challenge. This involves taking into account numerous stakeholders as well as country-specific technical challenges.

Solution

Speed Kit uses the new Service Worker technology to apply innovative caching algorithms for faster delivery of both static assets and highly dynamic HTML. Speed Kit therefore massively reduces latency through consistent browser caching and global edge caches. As a result, Speed Kit solves the Time-to-First-Byte bottleneck leading to faster rendering and a much improved user experience. In addition, Speed Kit also accelerates 3rd party services, optimizes the loading order of critical resources and applies automatic image optimization.
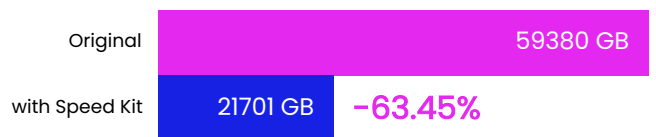
Performance by Continent
Improvement of the Web Vital "Largest Contentful Paint" (LCP) for global BMW sites

North America
31% Faster

Europe
34% Faster

Asia
33% Faster

Africa
47% Faster

South America
44% Faster

Oceania
24% Faster

Overall Monthly Image Savings
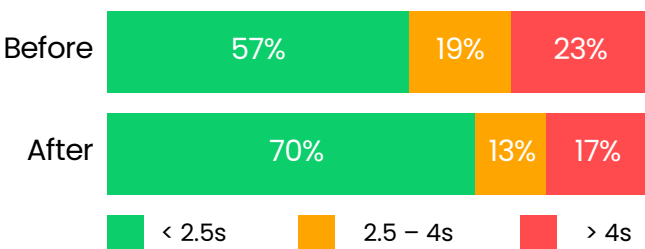Test data for BMW

Original — 59380 GB

with Speed Kit — 21701 GB — **-63.45%**

Overall, Speed Kit **saves 63.45% of unnecessary image data** for over **196 million** monthly images delivered to users.

Results on Google Core Web Vitals*
Largest Contentful Paint (LCP)

Before: 57% | 19% | 23%

After: 70% | 13% | 17%

< 2.5s   2.5 – 4s   > 4s

*across all 118 countries

Verified Results

Since Speed Kit is implemented via a JavaScript tag in the HTML template, the speed uplift can be A/B-tested. Through the use of real-user monitoring, we obtained statistically significant improvements across all web performance metrics. The consistent uplift in the Google Core Web Vitals like the Largest Contentful Paint across all contintents confirmed a substantially improved user experience.

33%
Faster in First Contentful Paint (FCP)
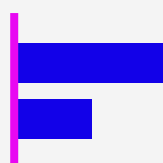
1.5x
Faster LCP overall, 728 ms time saved

100+ countries
Accelerated with Speed Kit