

Michelin has it all: Fast sites and reduced carbon footprint with Quanta and Scaleflex



Industry:

Automotive

Size:

10,000+ employees

Headquarters:

Clermont-Ferrand,
Auvergne-Rhône-Alpes,
France



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Case Study Highlights



4.5x lighter
images with no
impact on quality



4x reduction
in carbon
footprint



< 1 week
implementation to
achieve results

Michelin is a French multinational tyre manufacturing company based in Clermont-Ferrand in the Auvergne-Rhône-Alpes region of France.

Michelin wanted to identify, monitor and tackle performance issues in an international, multi-project context and find the right balance between web performance, digital sobriety and branding efforts.

To address their challenges and help prioritize the backlog, Michelin implemented **Quanta's Real User Monitoring dashboard** on Michelinman.com and utilized **Scaleflex's Cloudimage media optimization solution** to **smartly compress, optimize, and deliver images** via its multi-CDNs.



This project paved the way to a better engineering culture that will put performance and eco-conception in the center of our development process.



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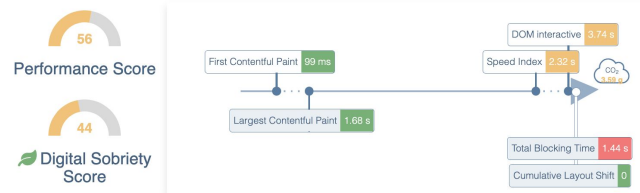
The Challenge

Michelin manages **over 250 websites across 40+ countries** through a CMS platform (Apostrophe). They develop widgets allowing authors in different countries to add content to the websites. The challenges regarding web performance were ensuring that the content they serve is continually optimized and that they ship only the code needed by the user and only when he needs it.

Web performance has always been a priority for the Digital team, which needed to spot weaknesses and make improvements constantly. The starting point was to be able to rely on monitoring and profiling tools to adapt and prioritize the performance topics. Then came an iterative phase with the evaluation of the types of issues (optimization complexity) and its validation (Is this issue really the problem? How to solve it? What would be the impact on SEO, UX, etc?).

In 2021, Michelin took a new step by transforming its All-Sustainable approach into goals for 2030 and beyond. Michelin group is **asking for a perfect User Experience** and to make their **websites more sustainable**.

The goal is to **improve the energy efficiency of all its products by +10% in 2030**, including the emissions linked to digital assets. The idea of **Digital Sobriety** is growing in the company, so they needed new indicators and solutions to address the subject.



The Solution

To address their challenges and help prioritize the backlog, Michelin implemented **Quanta's Real User Monitoring dashboard** on Michelinman.com, to preview the most-visited pages and their related performance score (both in terms of **page load time** and **estimated carbon footprint**).

The tool identified that one of its most visited pages emits 3.6 grams of carbon footprint. This represents **3600 kilograms of CO2** for every 1 million view (more than the footprint of a person making a round trip by air from Paris to Tokyo!).

Since the report showed that the main optimization was to reduce the size of images on the page, Michelin utilized **Scaleflex's Cloudimage media optimization solution** to **smartly compress, optimize, and deliver images** via its multi-CDNs.

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Image optimization was a **quick win** in the web performance improvement project. Instead of sending the images from the origin server, Cloudimage uses a **multi-CDN technology** to deliver them to the closest point-of-presence of the user.

The cached version will then be accessible to all future local users. Cloudimage also ensured that **all images were loaded only when displayed on the screen**.

The results?

- **Huge decrease in the data transfer** over the network
- **Faster user experience** (decrease in LCP and total blocking time)
- **Reduced carbon footprint** (by 4 times!)



After implementing Cloudimage, Michelin's webpages now weigh less than 1 gram of CO₂ as seen on Quanta's carbon monitoring tool.

The Company

Michelin is a French multinational tyre manufacturing company based in Clermont-Ferrand in the Auvergne-Rhône-Alpes region of France. The Group's goal is to make Michelin one of the most innovative, responsible, and high-performing companies worldwide across all of its responsibilities: economic, environmental, and social. It's corporate social responsibility efforts are embodied by its sustainable development and mobility strategy. Thanks to an innovative recycling initiative, each tyre has 4 lives.

This cross-team strategy is becoming more present and visible in the Michelin Digital Factory, a team dedicated to conceiving and deploying all apps and websites for the different brands of the Group. While web performance has always been a strong focus for the technical teams, it tends to add more green string to their bow.

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