



[Isla McKetta](#) | [May 5, 2021](#)

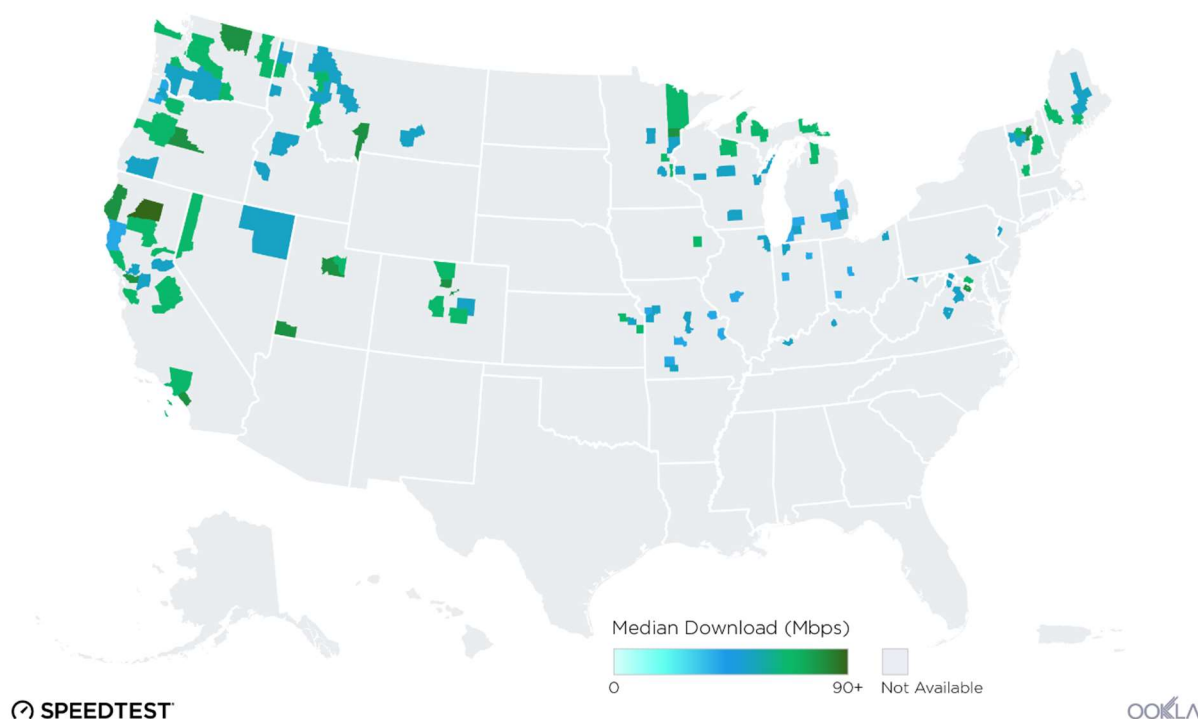
### **Starlink: Bridging the Digital Divide or Shooting for the Stars?**

[Elon Musk has a vision to use Starlink satellites to deliver world-class internet speeds](#) to the [rural households that have been left behind](#) by so many infrastructure projects over the years. It's a noble goal, and one that's become increasingly necessary given our reliance on the internet over the past year. It could also help bridge the glaring gaps in performance between cities and rural communities [which the Biden administration is prioritizing in the American Jobs Plan](#). Starlink is still in beta phase, but we decided to use data from [Speedtest Intelligence](#)® to investigate Q1 2021 performance in the U.S. and Canada to see if the program is living up to expectations.

**Starlink speeds are sometimes a vast improvement, sometimes not**

## Median Download Speed for Starlink in Selected U.S. Counties

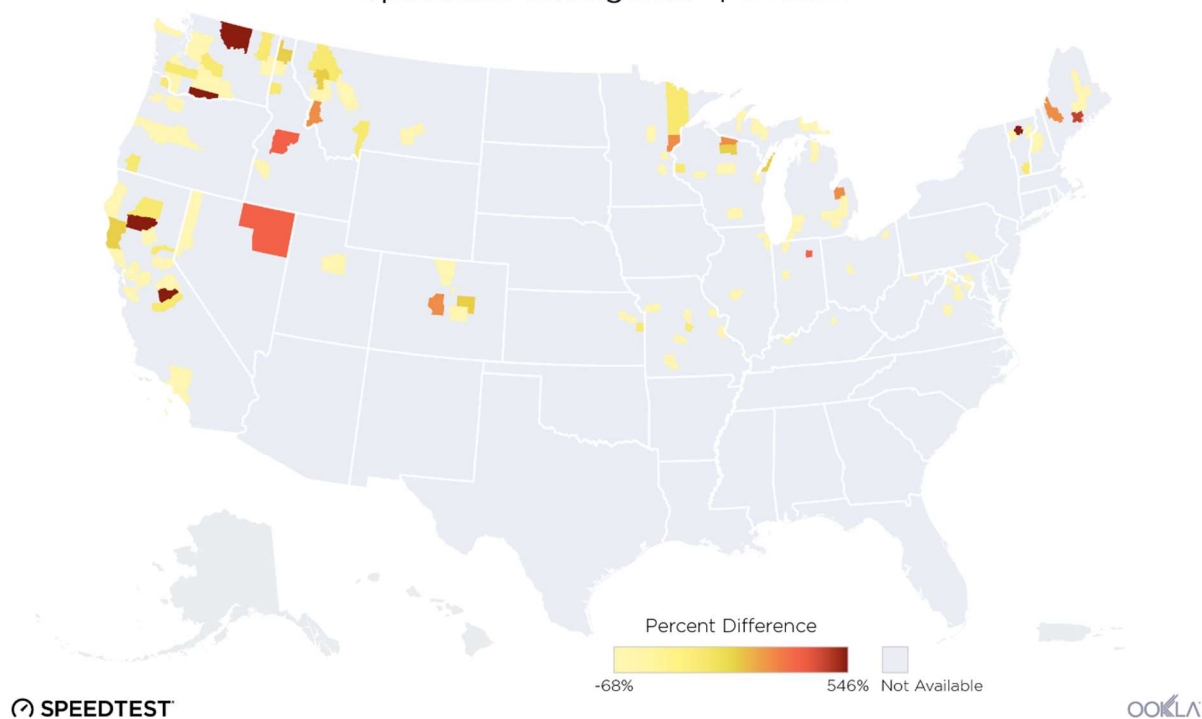
Speedtest Intelligence® | Q1 2021



In the U.S. during Q1 2021, median download speeds from Starlink ranged from 40.36 Mbps in Columbia County, Oregon to 93.09 Mbps in Shasta County, California. These represented everything from a dramatic improvement over other fixed broadband providers (545.6% faster in Tehama County, California) to a disappointment (67.9% slower in Clay County, Missouri).

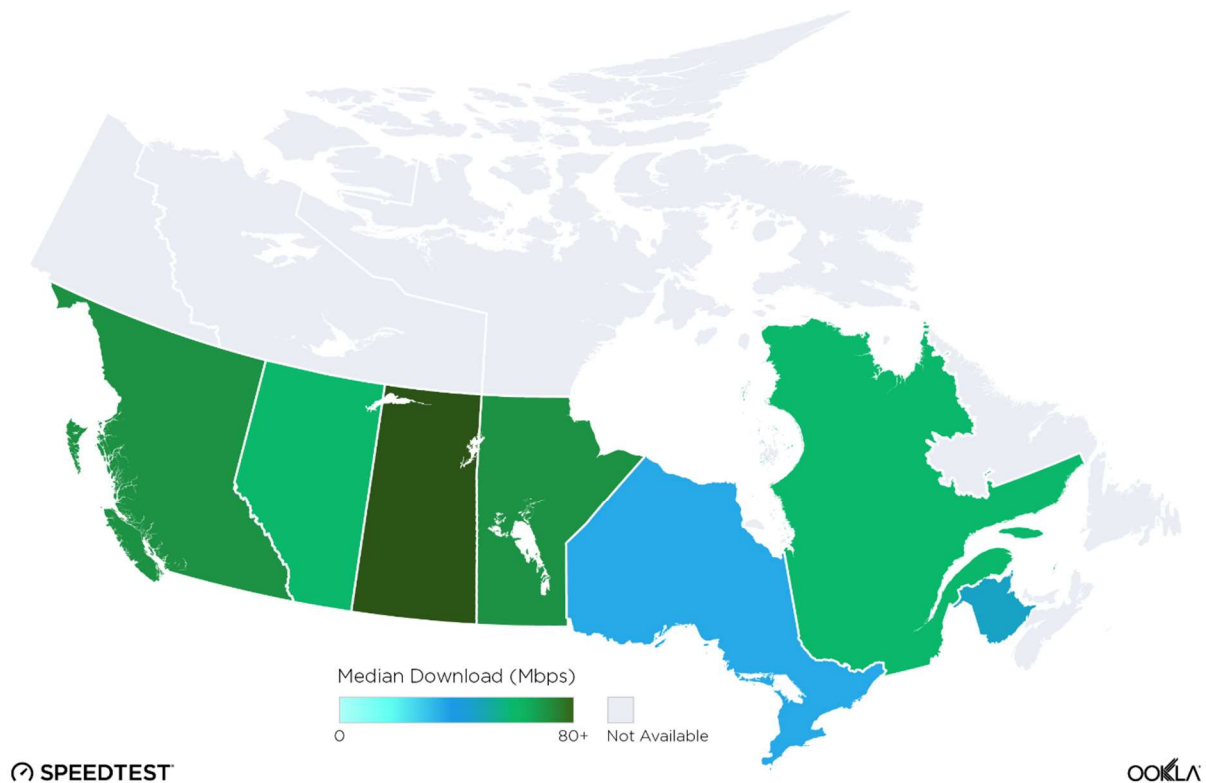
## How Starlink's Download Speed Compares to All Other Providers in Selected U.S. Counties

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**Starlink shows a narrower range of performance in Canada**

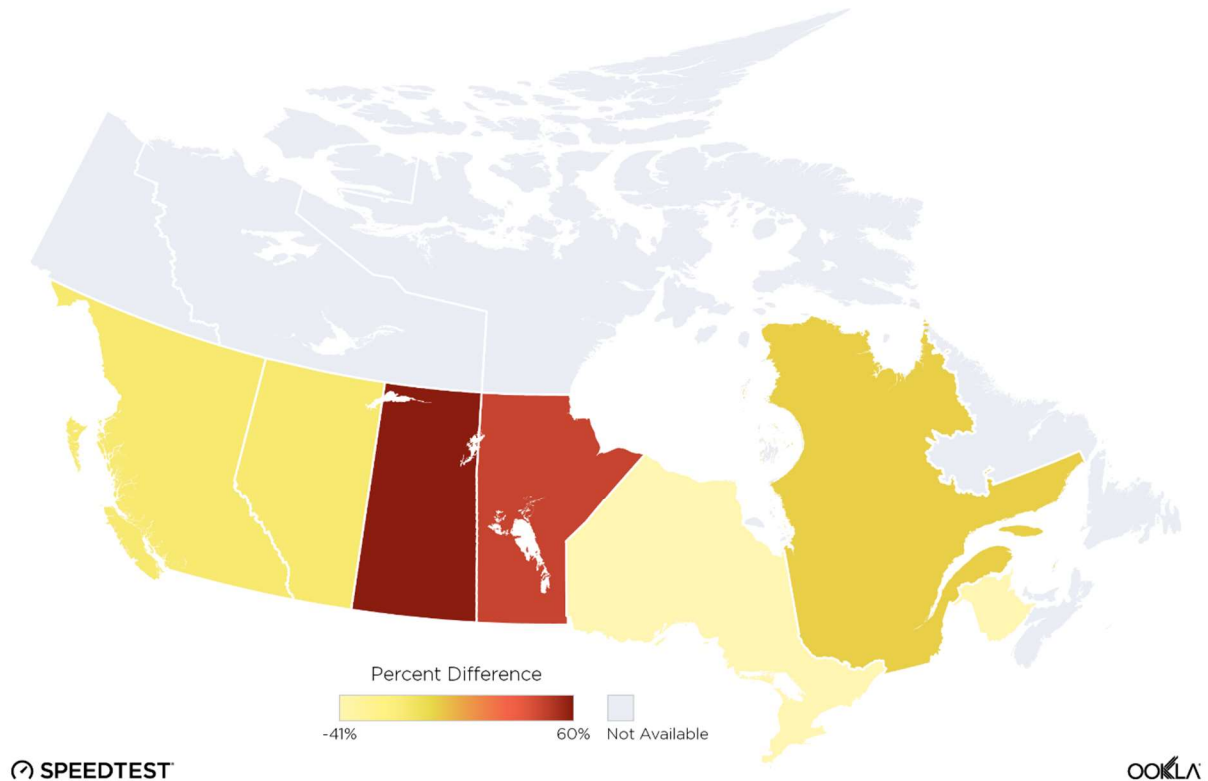
## Median Download Speed for Starlink in Canadian Provinces Speedtest Intelligence® | Q1 2021



Starlink's Q1 2021 median download speeds in Canadian provinces showed a smaller range than in the U.S. with a low of 53.61 Mbps in Ontario and a high of 80.57 Mbps in Saskatchewan. Percentage difference when compared to all other fixed broadband providers also showed a narrower range. In Saskatchewan and Manitoba, Starlink customers reported median download speeds 59.6% and 38.5% faster than those for all other fixed broadband providers combined. In Québec, median download speeds were nearly equal, with Starlink performing only 3.4% slower. In B.C., Alberta, Ontario and New Brunswick, on the other hand, Starlink's median download speeds were 20.9%, 24.2%, 29.5% and 40.7% slower than other fixed broadband providers, respectively.

## How Starlink's Download Speed Compares to All Other Providers in Canadian Provinces

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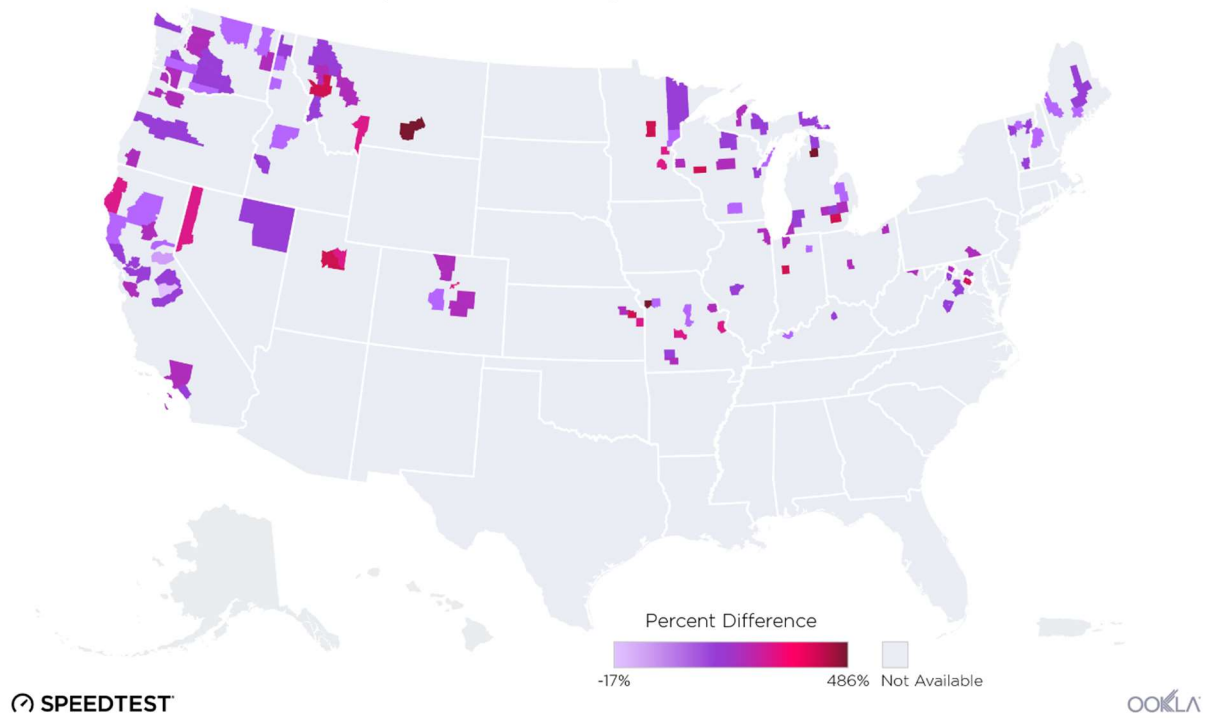


### Starlink latency is up to 486% higher in U.S., 369% in Canada

A reasonable latency is critical to effective internet use. If your latency is too high, you might be the one on the video call with the tinny voice who's answering questions when the conversation's already moved on. If you're a gamer, you already know that latency can cause your characters to stutter-step around at critical moments. Starlink plans to use low-Earth orbit satellites with laser links to radically decrease latency in rural areas. What we're seeing so far, though, is that Starlink's latency is higher than the alternatives, often much higher.

## How Starlink's Latency Compares to All Other Providers in Selected U.S. Counties

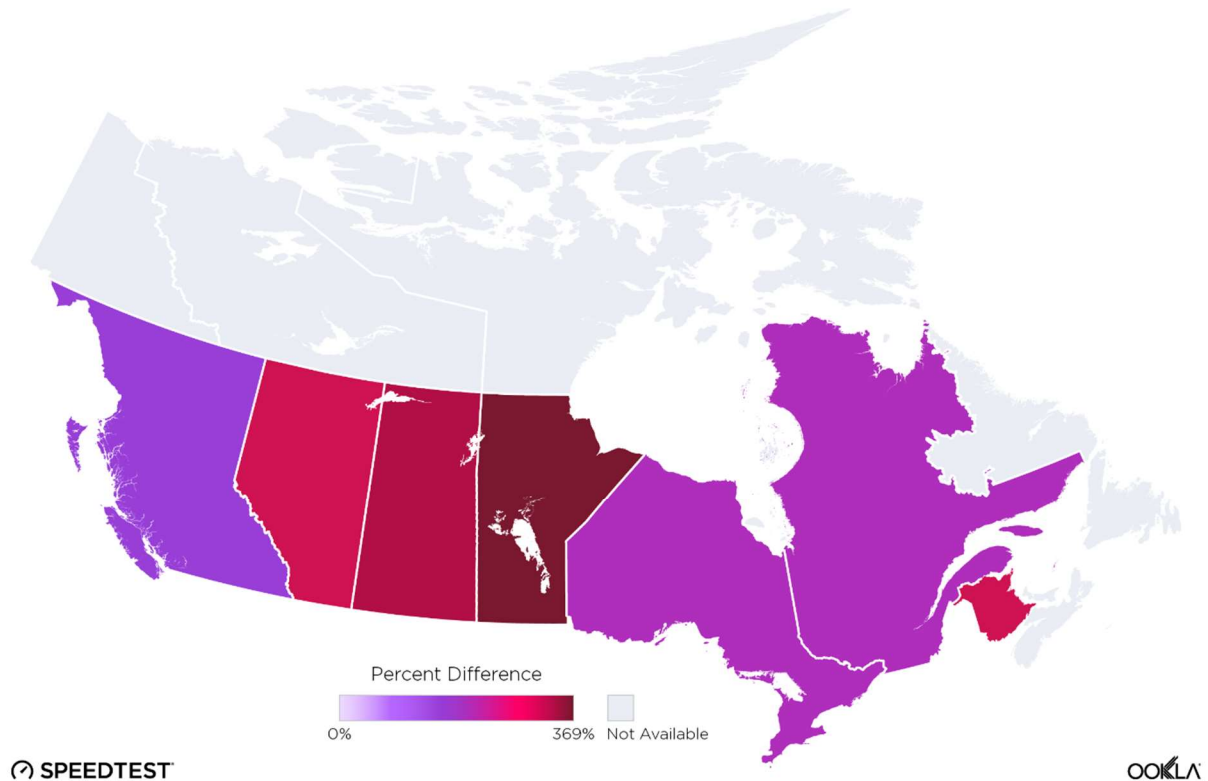
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Starlink's latency was higher in all but one of the U.S. counties surveyed during Q1 2021. The exception was Mariposa County, California where Starlink's latency was 17.4% lower than that of all other providers combined. Median latency values on Starlink were observed from 31 ms (Kittitas County, Washington) all the way up to 88 ms (Otsego County, Michigan). For comparison, median latency values for all other providers combined ranged from 8 ms (Fairfax County, Virginia) to 47 ms (Davies County, Kentucky).

## How Starlink's Latency Compares to All Other Providers in Canadian Provinces

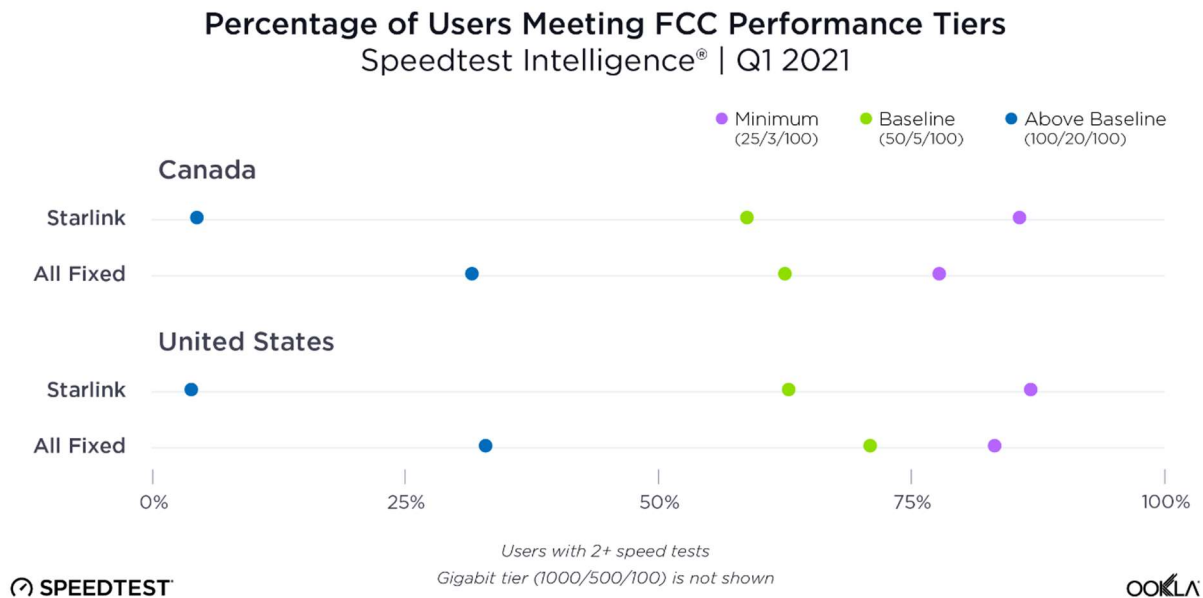
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In Canada, Starlink's latency was higher in all provinces surveyed during Q1 2021. With median latency values from 34 ms (B.C.) to 61 ms (Saskatchewan), Starlink's latency was 209.1% to 369.2% higher than that of all other providers combined.

### Starlink meets minimum tier for FCC's Rural Development Opportunity Fund

In order to compete for the FCC's [Rural Digital Opportunity Fund \(RDOF\)](#), providers must meet the minimum performance tier (25 Mbps download / 3 Mbps upload / 100 ms latency). We analyzed Speedtest® results for users with more than two tests during Q1 2021 to see whether Starlink could potentially qualify for this funding.



In both the U.S. and Canada, Starlink provided competitive or better service at the minimum (25/3/100) tier. In the U.S., 86.7% of Starlink users met this threshold, compared with 83.2% of those on all other fixed broadband providers. Although the FCC's criteria don't apply north of the border, 85.6% of Canadian Starlink users met the Minimum threshold, compared with 77.8% for all other providers. Starlink showed a smaller proportion of users meeting the baseline and above baseline tiers than all other providers combined.

Given this data, it's safe to say Starlink could be a cost-effective solution that dramatically improves rural broadband access without having to lay thousands of miles of fiber.

Musk's Starlink experiment is certainly fascinating and we applaud any effort to get better service for rural residents. That said, it's clearly early days for the rapidly growing Starlink, and results from Q1 may not be indicative of future performance. We'll be watching to see how performance improves as more satellites are launched and as more users join the service. If you're on Starlink, [take a Speedtest](#) to share how your connection is performing.

*Editor's note: this article was updated on May 17 with a sentence clarifying how this data should be interpreted.*

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### About the Author



#### **Isla McKetta**

Isla was the first content manager at Ookla, working her way up to Sr. Director of Consumer Marketing in her 8+ years with the company.