



## CASE STUDY

# How Three Builds and Maintains the UK's Fastest 5G Network

When the United Kingdom became one of the first markets to launch 5G globally, mobile operators quickly began competing to build the best 5G network. As every mobile operator in the market ramped up investment to expand 5G, Three UK invested over £2 billion as part of a five-year program to deliver the UK's Fastest 5G Network. These investments included network intelligence to enable data-driven network improvements.

Three uses Ookla Speedtest Intelligence® to find geographic areas for 5G network improvements. As a result of their network investments, Three has won the Speedtest Award™ for Fastest 5G Network for four consecutive award periods including Q3-Q4 2022, Q1-Q2 2022, Q3-Q4 2021, and Q1-Q2 2021.

### Speed Score™

248.16

### Median download speed

292.57  
Mbps

### Speedtest Awards™



UNITED  
KINGDOM'S  
FASTEST  
5G NETWORK



*"Ookla network intelligence helps us analyze and optimize our 5G network, and our Speedtest Award helps us publicize our position as the Fastest 5G Network in the United Kingdom."*

— Iain Milligan, Chief Network Officer at Three UK

## Benefits



Prioritized areas with the highest impact on end-users for 5G network improvements



Extended 5G to more than a third of the UK population across 370 towns and cities with 2,500 live sites



More than tripled median download speed for all network technologies since launching 5G in 2019

## Situation

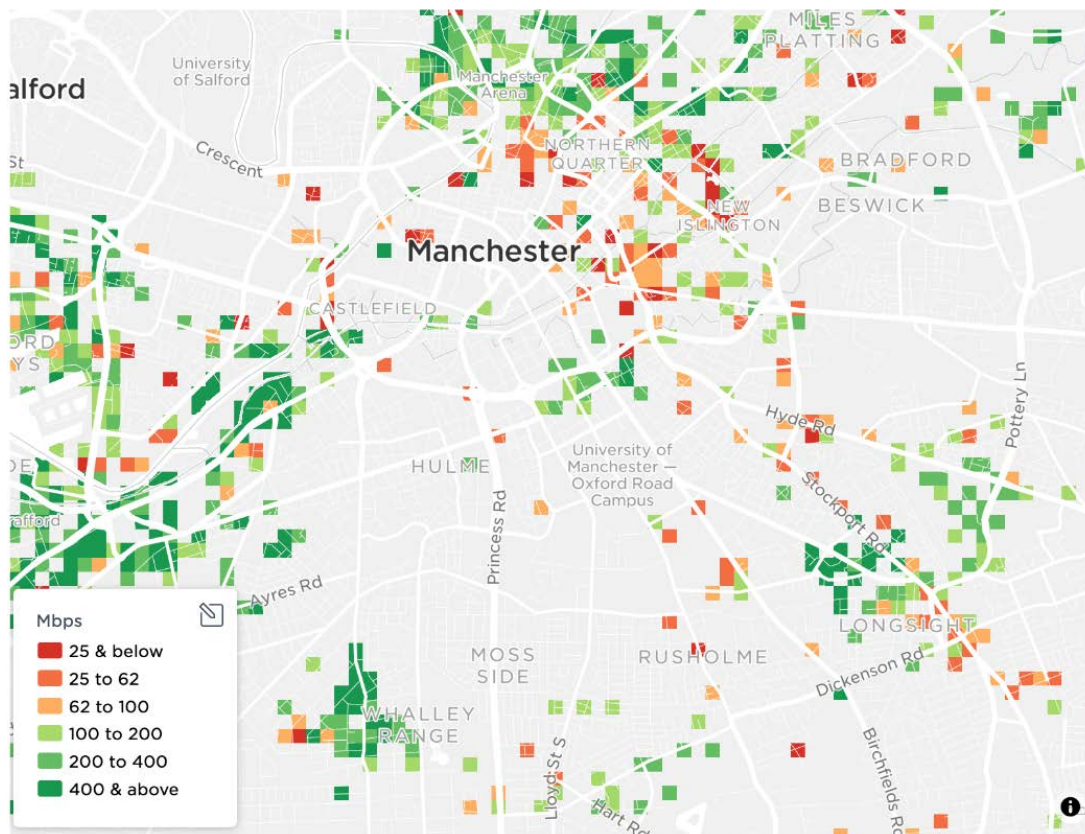
When the United Kingdom auctioned off spectrum licenses in 2021, Three acquired the largest dedicated band of 5G spectrum — 140MHz frequency across several 5G spectrum bands, including a 100 MHz block of contiguous spectrum in the 3.3-3.8 GHz band. To build out a top-performing 5G network — especially with their recent 5G spectrum acquisition — it was important that Three understood where to invest in improvements in order to prioritize network build-outs that would result in the most consumer benefit.

## Solution

Using Speedtest Intelligence, Three was able to identify areas for 5G network prioritization. In the following example from Manchester, the red dots represent areas with poor 5G performance, highlighting problem areas in the city center that existed in 2020.

### Median 5G Download Speeds in Manchester

Speedtest Intelligence® | 2020



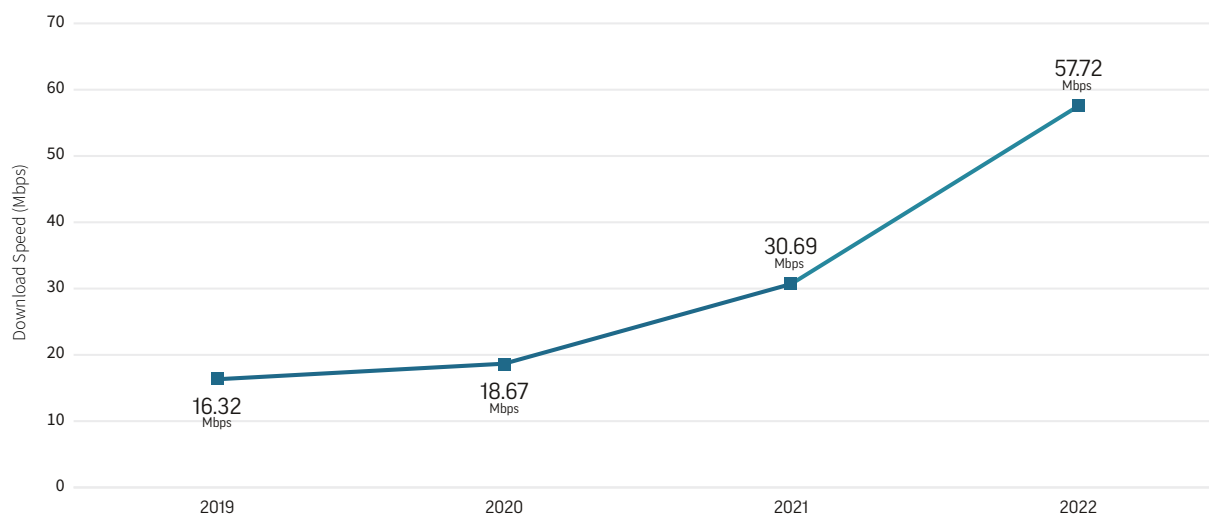
Three was able to analyze their 5G performance in Manchester to pinpoint areas for improvement in the city center. In this way, Three was able to prioritize network build-outs that would improve 5G performance and coverage across the entire country.

## Outcome

Since launching 5G in 2019, Three has extended 5G coverage to more than a third of the UK population across 370 towns and cities, with 2,500 live sites. Three's median download speed for all network technologies has increased consistently over the past three years. Starting at 16.32 Mbps in 2019 and jumping to 57.72 Mbps in 2022, they've more than tripled their median download speed.

### Median Download Speed (All Network Technologies) for Three UK

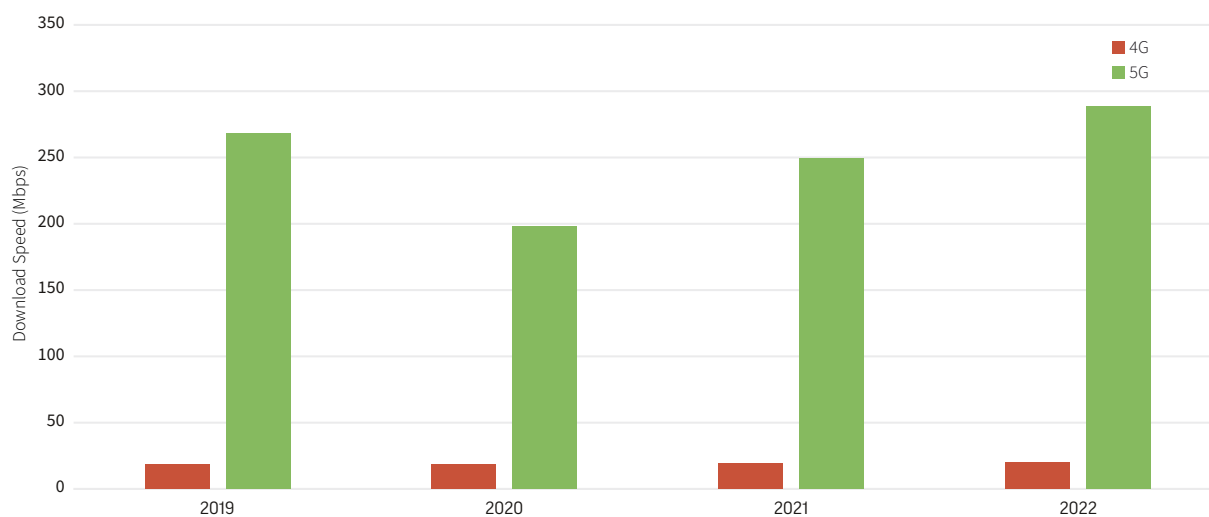
Speedtest Intelligence® | 2022



This increase is largely due to their investment in 5G. When comparing 4G and 5G speeds, you can see how 5G technology has increased overall network performance.

### Median Download Speed on 4G and 5G Technologies for Three UK

Speedtest Intelligence® | 2022



After using Ookla network intelligence to help build the UK's Fastest 5G Network, Three won the Speedtest Award for Fastest 5G Network.

By licensing the award, Three was able to showcase the superiority of their network on digital marketing campaigns, their website, social media, and on television — backed with verified, unbiased third-party data. Each advertisement features their digital Speedtest Award asset:



Consumers who saw these ads were significantly more likely to associate Three with having the UK's Fastest 5G Network.

Operators can use Ookla's crowdsourced network intelligence to prioritize network improvements for the biggest impact on consumer experience, and then leverage the Speedtest brand to build consumer awareness.