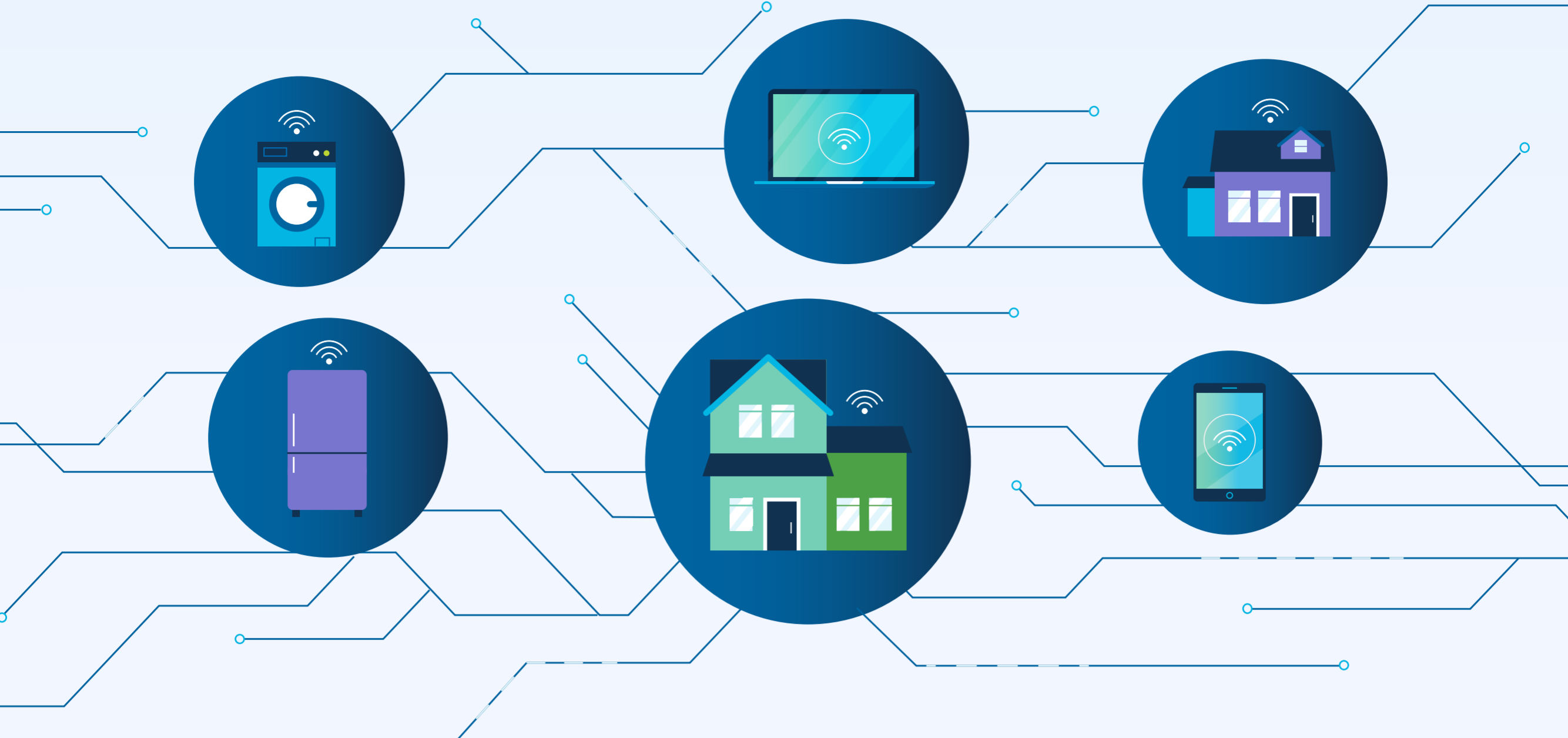


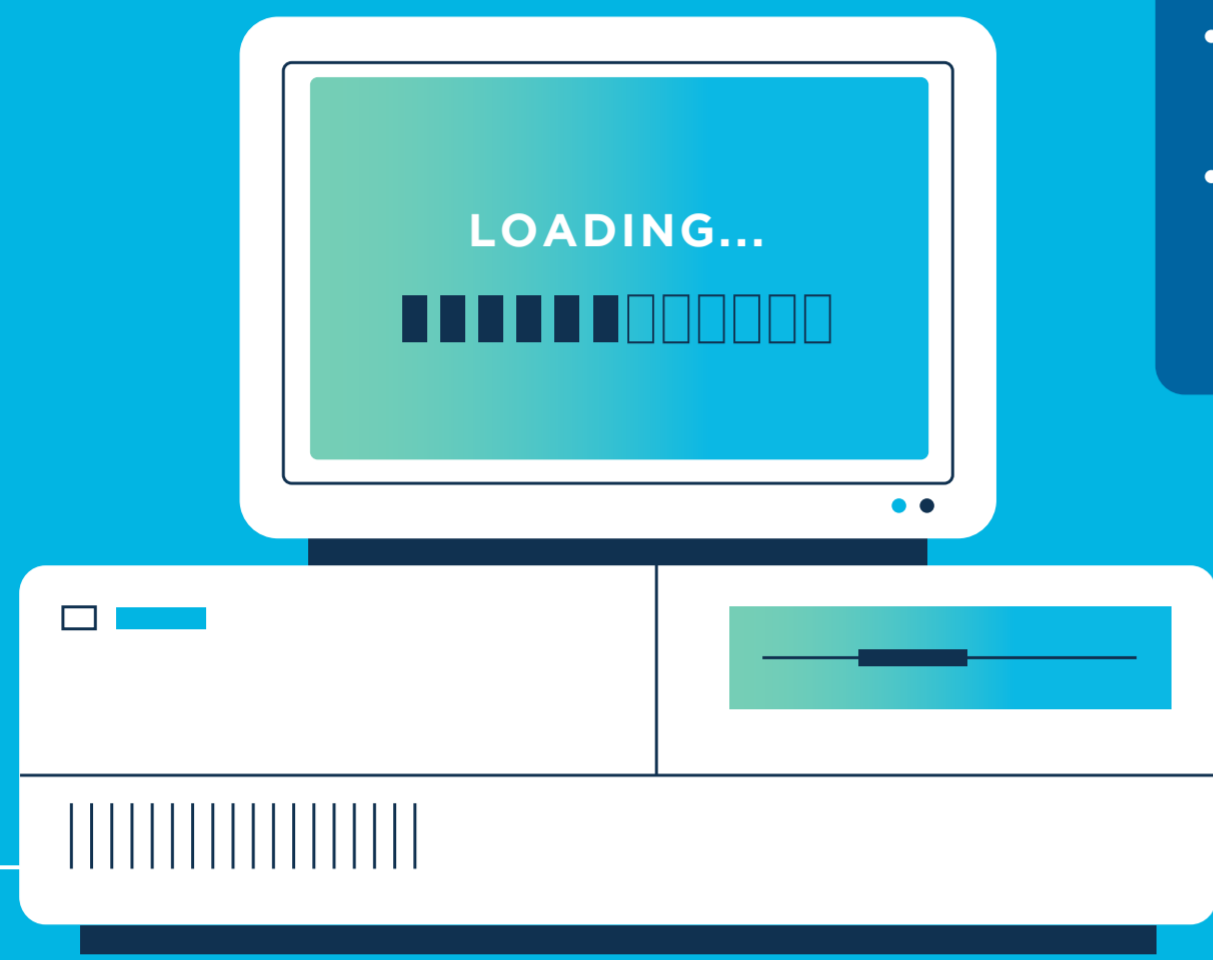
How innovations in infrastructure will power the future of broadband

The world depends on fast, reliable internet connection. Our current cable infrastructure meets the needs of today, but how can we meet the needs of tomorrow? We can look to fiber to help.



We've come a long way since the days of dial-up

The earliest way to access the internet, dial-up, is all but extinct.



Dial-up:

- Came from phone lines, which carried analog signals to our home devices
- Limited capacity (remember when you couldn't surf the web while someone else in your house used the landline?)

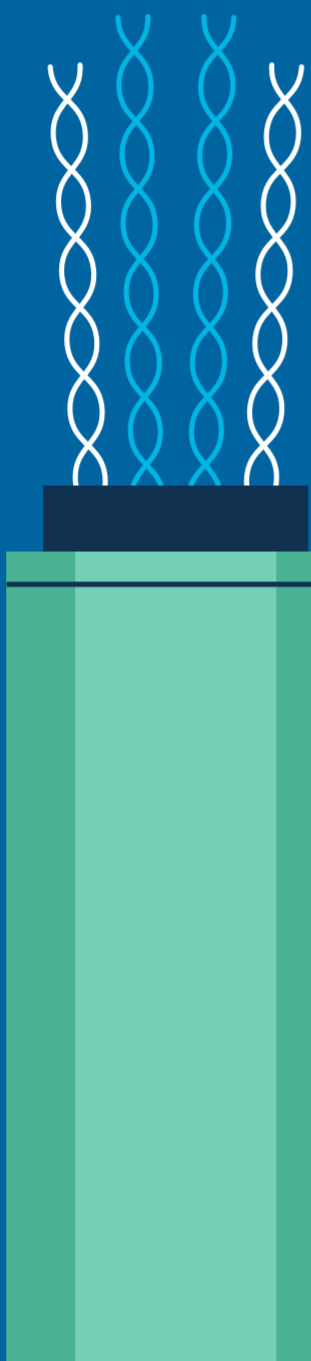
Improvements in communications infrastructure—including cables—have brought big changes to your internet connection over the years.

New cables make data transmission more efficient and reliable

Two types of cables—twisted-pair and coaxial—followed dial-up. These cables have been popular since their introduction and are still used today, even being combined with the latest innovations in infrastructure.

Twisted-pair cables:

- Separate, intertwined wires that run parallel to each other
- Durable and cost-effective
- Power telephone communication and Ethernet networks
- Susceptible to outside interference



Coaxial cables:

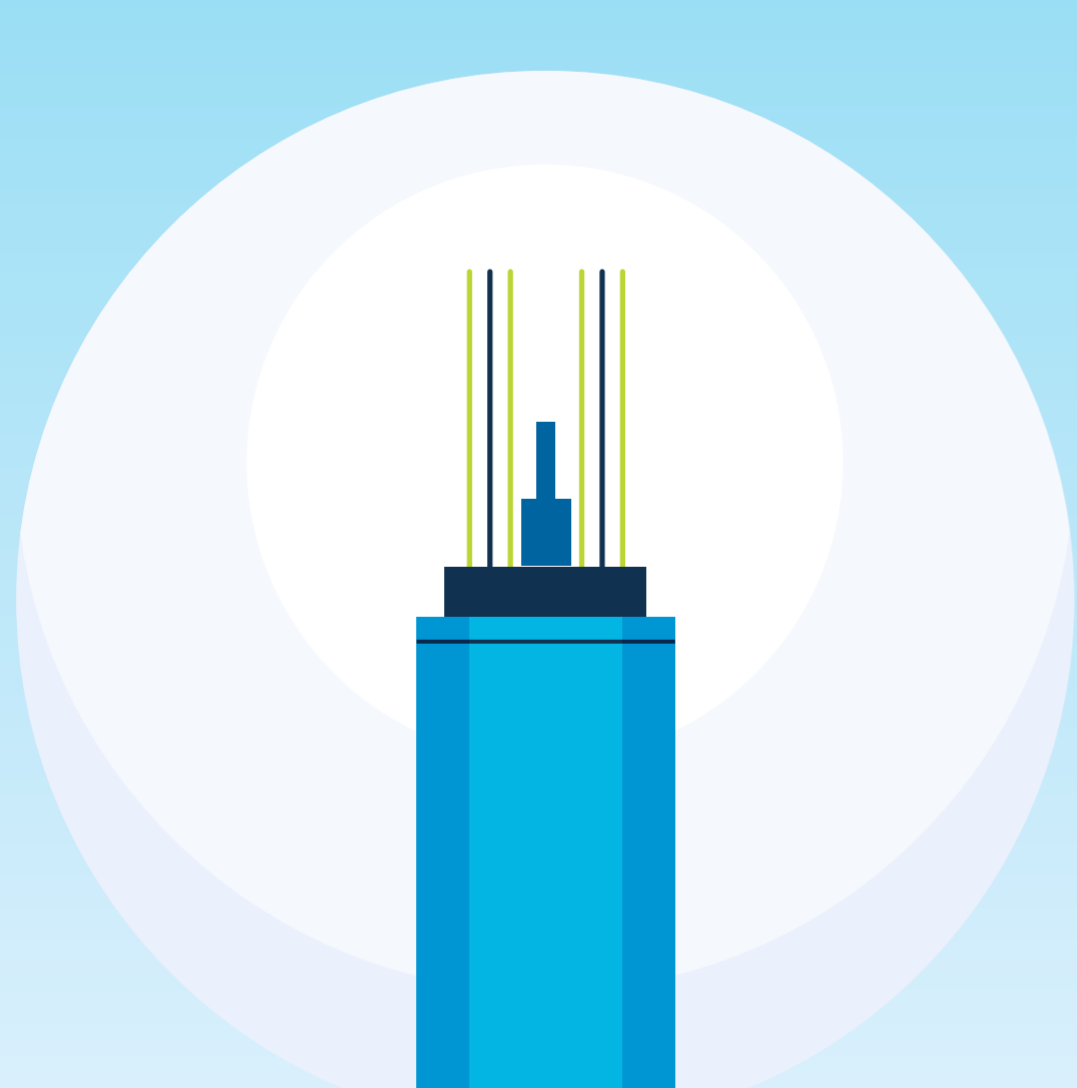
- An insulated, single copper core
- 80x the transmission capacity of twisted-pair
- Used for cable internet and TV
- Anti-jamming capabilities and protection from interference



Coaxials are a big step up from twisted-pairs, but they're not the perfect broadband solution. They experience some signal loss over long distances, and the internet speed fluctuates with heavy usage.

As more devices rely on the internet to function, we'll need even stronger infrastructure

Fiber provides the best internet available today, and it inspires further innovations in the broadband space for years to come.



Fiber:

- Resistant to interference
- Transmits data over greater distances
- Travels almost at the speed of light
- Internet providers can combine fiber with existing coaxial cable in a hybrid fiber-coax model

As the world becomes more connected to the internet we'll want to make sure we have the best connection available. Fiber can help us power the future of internet connection. The future is coming fast, but fiber is coming at the speed of light.



Learn more about how the electromagnetic spectrum powers data transmission at howdatamoves.com