Community Projects with Internet Connectivity:
Basic Concepts

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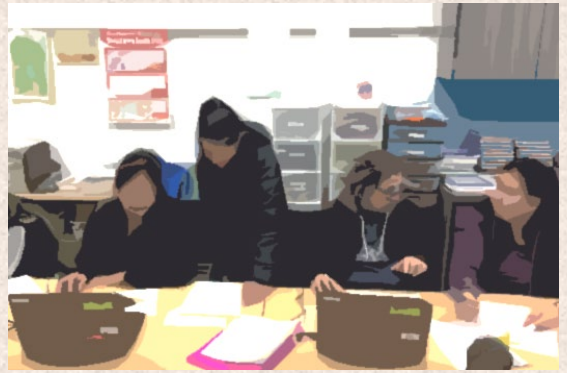
2025 Technology Matching Fund (TMF) Project Goals

- *Projects should focus on increasing internet access and adoption by providing digital navigator services, digital literacy training to new technology users, devices and technical support to new technology users, or internet access to low-income residents.*



- Types of ideas TMF applicants might be considering…
  - Access to internet at a computer lab
  - Access to internet in a community building or space
  - Providing 'hot spots' for program participants

Important Ideas to Know

- Internet
- Broadband
- Types of Broadband Connections/Internet Access
- Difference Between Wi-Fi and Mobile Hotspots

Internet

The “internet” is the network of connected computers all over the world

“Internet service” links a device (computer, smart phone, TV, etc) to other computers around the world to connect and share content

Access to an internet service connection comes from an Internet Service Provider (“ISP”)

There are different ways ISPs have your device connect to the internet

Fixed ways (via wires) and Wireless ways (via radio waves)

Broadband

"**Broadband**" is not the internet

Broadband is the path to ***access*** the internet

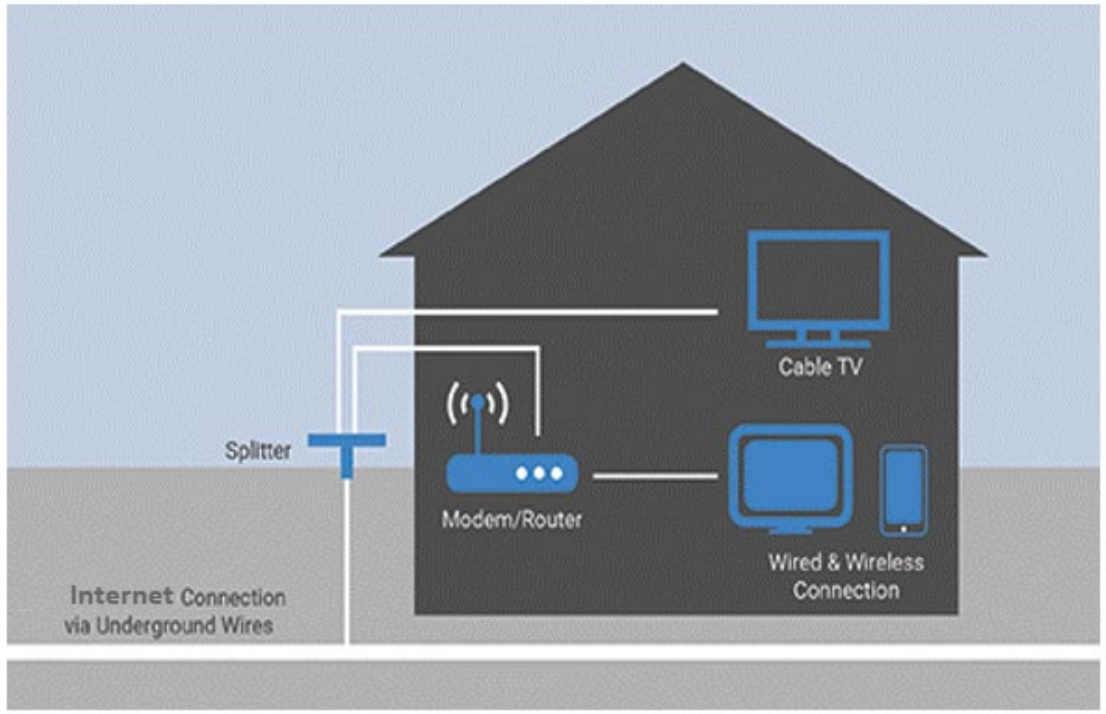
Many types of broadband paths

Different paths = different bandwidth ("service") capacity

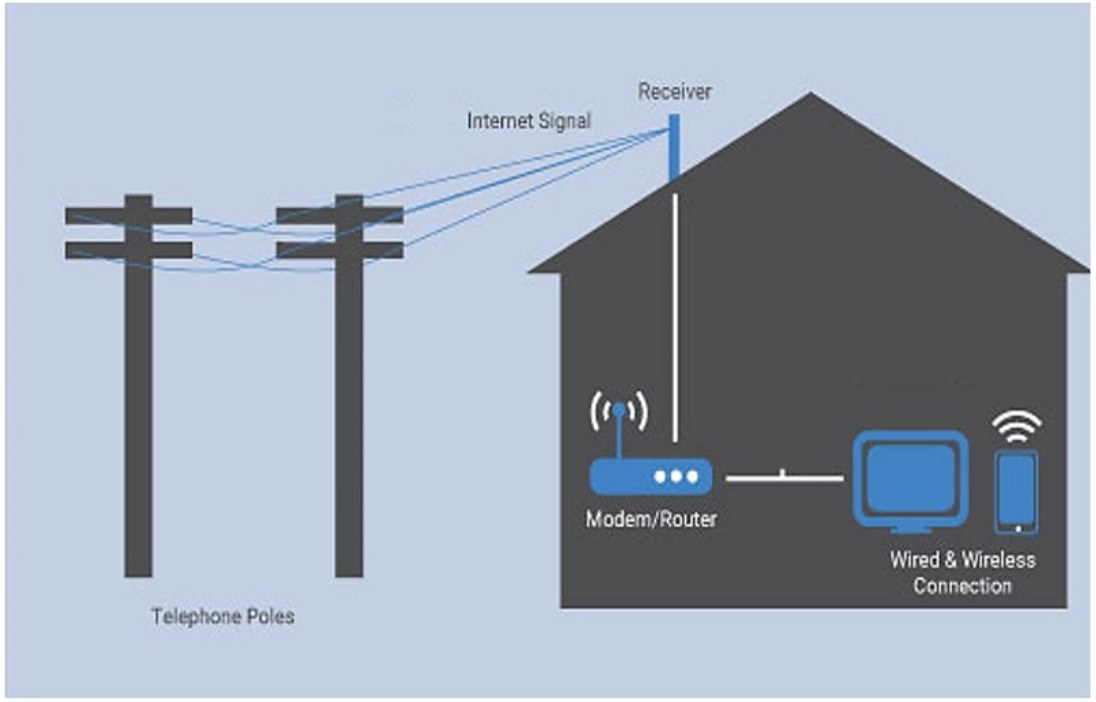
Options include *fixed* home internet path and *mobile* "on to go" internet path

Fixed Internet Connection Through *Wires*

Underground Wire Internet Connection

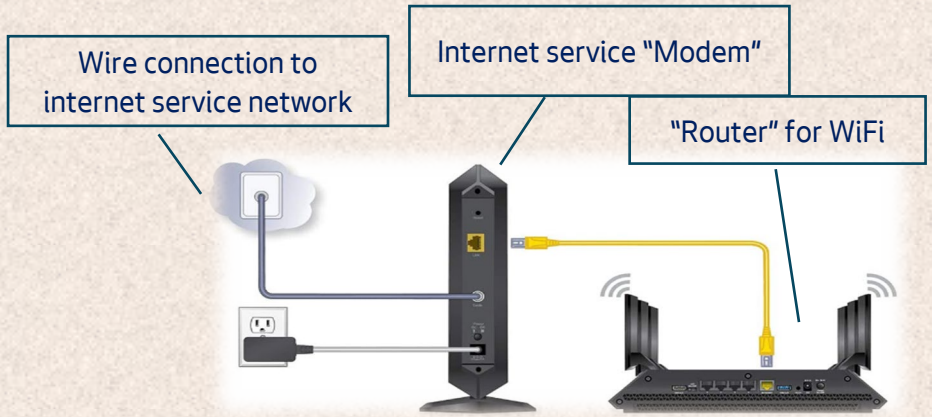


Overhead Wire Internet Connection



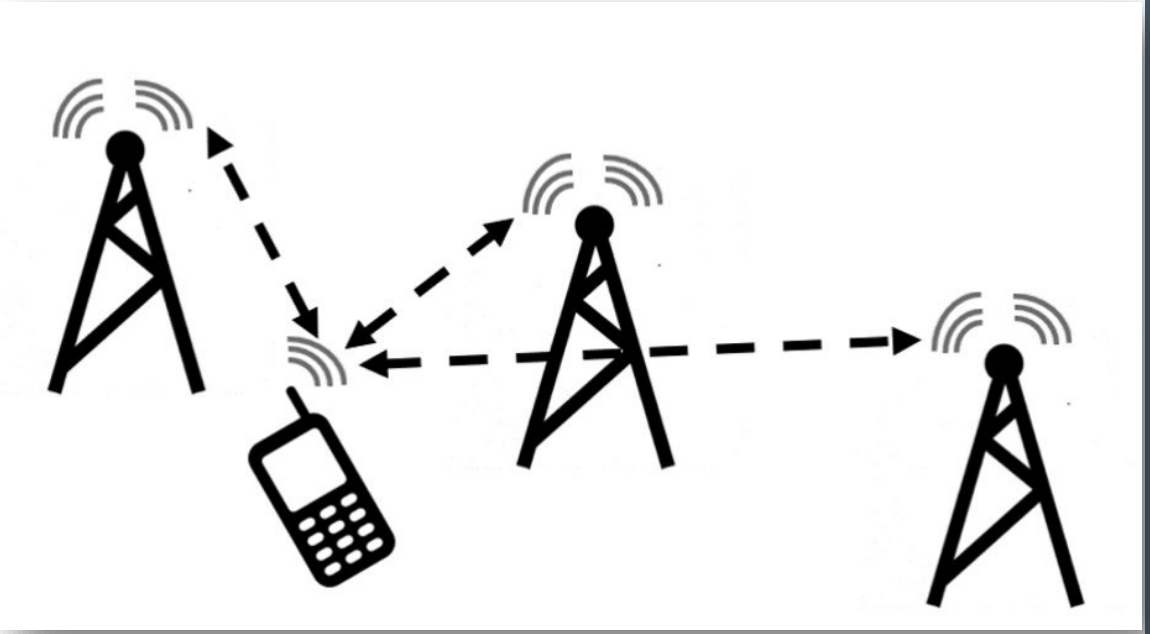
Key Ideas – *Wired Service Connections for WiFi*

- **The internet access travels over *wires* into the building**
- **The wire connects to a modem/router device in the building**
  - Connecting the wire to a *router* device shares the signal *wirelessly ("WiFi")* around the space.
  - Things in a building (e.g, walls, doors, mirrors) can impact the WiFi signal
  - If a device (e.g. computer) is closer to the WiFi router, it can improve the connection signal. If device is farther away, can have a poorer connection signal.
  - Other devices can be added in a building (terms like extenders, amplifiers) to help boost the router's Wi-Fi signal to help deliver a stronger signal to other areas in the building
- **Thinking of adding WiFi to your community project? Plan for where to place the connection, equipment and whether other extender equipment is needed to reach your service access goals.**
- ***Access for All* Program for free internet connection to non-profits** (www.seattle.gov/tech/internet-and-devices/free-and-discounted-internet)

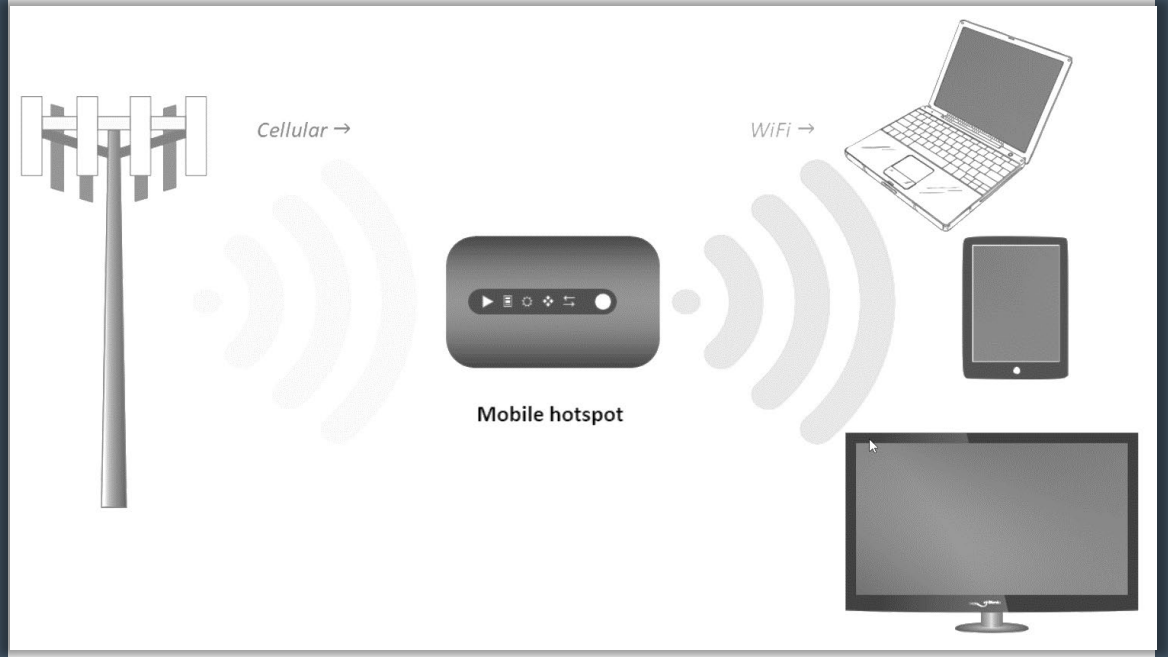


Internet Connection through Mobile (*Wireless*) Connection

Cellular "Mobile" Wireless (4G, 5G)

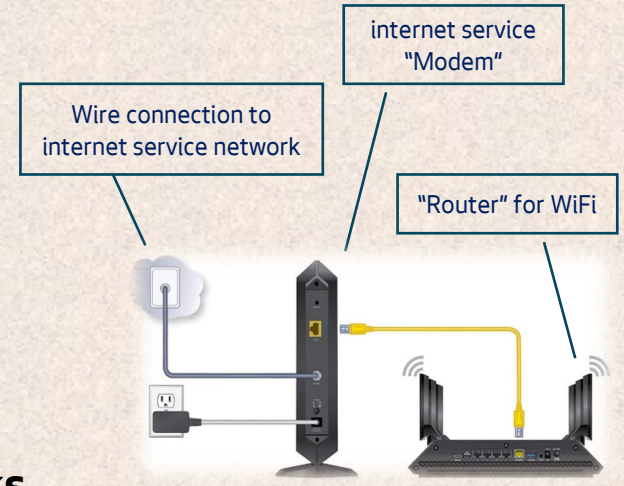


"Mobile" Hotspot



Key Ideas – *Wireless Service Connections*

- **The internet access travels *without wire connection* to the location (or to cell phone or mobile hotspot)**
  - The connection travels to the home/building over radio wave signals and antennas.
  - There is a wired connection at other places *in the ISP network*.
- **"Fixed Wireless" service is from companies that use cellular ("mobile") networks**
  - A modem device is attached to/in the home/building to connect signal and send it into the home/building.
  - The service connection is not "mobile". It does not move when a cell phone or laptop is away from the home.
- **"Mobile Hot Spot" service is from companies that use cellular ("mobile") networks**
  - A Hot Spot is little modem to pick up cellular signal.
  - Hot Spot *is* "mobile". It can be moved/used anywhere inside or away from the building/home.
- **"Wireless" and "WiFi" are not the same**
  - WiFi is one *type* of wireless internet connection. Others are satellite, cellular service.
    - A WiFi signal comes from device that is wired to internet access.
    - A WiFi signal is only available in a certain area of the wired WiFi device.
- **"Wireless" and "Mobile" often used for internet connection using *cellular* phone networks**
  - Using "Mobile" phone or hotspot to connect to internet uses *cellular network* and requires having a *Data service plan* for the phone.
  - Can switch cell phone to use WiFi when it is available, instead of cellular network, to connect to internet without using cell data plan



Questions for Your Project Planning?

Let us know and we can help connect you with resources.

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