What are my Broadband requirements?

TV bandwidth requirements per tv
Older Standard TV (SD) 3 Mbps
High definition TV (HD) 5 Mbps
Ultra-high definition TV (UHD or 4K) 25mbps

Video conference to calculate your channel capacity:
Symmetric 1280x1024 screen 10 people

	Server		Client(each laptop)	
Data flow	Inbound	Outbound	Inbound	Outbound
Necessary bandwidth	10.1 MBit/s	11.5 MBit/s	1.2 MBit/s	1.1 MBit/s

It's recommended to have 50% extra capacity to ensure maximum performance.

Telecoms requirements
For voice communication the greater the connection speed, the better the voice quality you can get. So for 30 users, I would suggest your bandwidth requirement would be 10 x 80 Kbps (800 Kbps) upload and 10 x 80 Kbps (800 Kbps) download based on 1 in 3 people are using it at any one time.

What do we need to upgrade to take a full advantage of a 1-gigabit connection?
FastEthernet is needed to fully realize the high speeds of the B4AV network.

1. Check the network ports on your devices (computers/ servers)**.**

- Equipment purchased within the last two to three years, they may already be equipped with Gigabit/1,000 Mbps-ready network ports.

2. Check your cables.

- Look at the side of your network cables. If they are all labelled 'Cat5e', you are ready to go. If not, you can purchase new cables relatively inexpensively.
- In most cases, Cat6 cables do not provide a significant performance increase over Cat5e cables. However, if you wish to future-proof your network, you may consider using Cat6 cables very little difference in cost.

3. Check your router/switch.

- Even if every other part of your network is upgraded to Gigabit standard, if your router and switch are not gigabit/1,000mbps, they will bottleneck your network.

4. Wifi routers

- Wifi speeds are dependant on wifi routers and the user's equipment. The following equipment will give speeds of;
  802.11n models up to 333mbps
  802.11ac models up to 433Mbps.