Network design

The following parameters shall be based on while designing institution network:

1. **Number of users in the institution:** The number of network users shall be both employees and guests.
2. **Services accessed or offered by the institution:** Services shall be defined and categorized depending on operational and availability requirements.
3. **Broadband technology:** The technology to be used shall be chosen according to location, institutional business requirements, and offices set up. Wireless local area networks are advised for convenient and modernized work spaces.
4. **Physical network diagram:** The design of the physical network diagram will consider the number of users based on the institutional structure, the interior design/aesthetic of the building and sitting arrangement (i.e. whether all users sit on the same floor or on different floors) and shall also consider whether the infrastructure of the building is shared or not.
5. **Logical network diagram:** The design of the logical network diagram shall consider existing systems, services, and applications according to the institutional business processes. The design should also provide the capability for scaling up and growth.
6. **Network Security:** All Government institutions shall comply with the current cyber security directives for network and information systems issued by a competent authority.

The below recommended bandwidth allocated to the different categories of users considers the average number of end user devices to be two and these devices can be computers, smartphones or tablets among others.

Number of users using devices	Bandwidth in Mbps		Number of users using computers	Bandwidth in M
1-10	15		121-140	210
11-20	30		141-160	240
21-30	45		162-180	270
31-40	60		181-200	300
41-50	75		201-240	360
51-60	90		241-280	420
61-70	105		281-320	480
71-80	120		321-360	540
81-90	135		361-400	600
91-100	150		Above 400	Individual Cas Basis (ICB)
101-120	180			

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