Network Design

- **Number of users in the institution:** identify the number of network users both onsite and offsite.
- **Services accessed or offered by the institution:** services should be defined and categorized depending on processes and availability requirements
- **Broadband technology:** should be chosen according to location, institutional business requirements, and offices set up. Wireless local area networks are advised for convenient and modernized work spaces
- **Bandwidth requirement1:** minimum bandwidth requirement should be according to user needs.

Number of staff using computers	*Bandwidth in Mbps*		*Number of staff using computers*	*Bandwidth in Mbps*
1-10	2		121-140	28
11-20	4		141-160	32
21-30	6		162-180	36
31-40	8		181-200	40
41-50	10		201-240	48
51-60	12		241-280	56
61-70	14		281-320	64
71-80	16		321-360	72
81-90	18		361-400	80
91-100	20		Above 400	Individual case basis
101-120	24			

- **Physical network diagram:** should consider the number of users based on the organizational structure, interior design of the building and sitting arrangement (i.e. whether all users sit on same Floor or on different Floors)
- **Logical network diagram:** should take into account systems, service, and applications according to the institutional business processes.
  The physical and logical network infrastructure design in Government institutions should be put in four categories based on the number of users:

  - **Category 1:** Small-sized network infrastructure for up 30 users
  - **Category 2:** Medium-sized network infrastructure for up 50 users
  - **Category 3:** Large-size network infrastructure for about 100 users
  - **Category 4:** Network infrastructure for more than 100 users

- **Network security:** all government institutions should comply with the cybersecurity directives adopted in June 2018 for network and information systems.

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