

13.4 Operational Considerations

Operational considerations include such aspects as training, maintenance, operations, and sparing.

New technologies imply, to varying degrees, new training requirements and perhaps maintenance and repair personnel with different skills. In any event, new staffing levels need to be considered and these requirements specifically must be included in the feasibility study.

The types and total quantity of spares that must be held increases if the number of types and versions of equipment in the network is increased.

Operational considerations generally encourage maximizing standardization. However, arguments for standardization should not be allowed to impede unnecessarily the long-term and cost-effective evolution of the entire network.

13.5 Reliability

Reliability has many aspects. Some typical questions to ask include:

- Are failure modes soft or hard (degraded performance or total outage)?
- How often and for how long will service likely fail? Is there any diversity or protection available?
- How quickly can service be restored considering the way troubles are detected and reported as well as travel times and on-site repair or restoral procedures?
- Has the system demonstrated reliable operation in your environmental conditions?