This appendix provides short definitions of submarine capabilities that, in the view of submarine designers, are major design (and cost) drivers.

- **Burst speed**: Maximum NR-2 sustainable speed for approximately five hours.

- **Transit speed**: Maximum NR-2 speed sustainable indefinitely (days) in steady-state point-to-point operations.

- **Ingress/on-station/egress speed**: Ingress speed is the speed used on entering an AOI to maximize time on station while limiting the probability of counterdetection. On-station speed is the desired search speed in the AOI. Egress speed is the speed used to exit the AOI to minimize time there while limiting the probability of counterdetection. In general, these speeds are similar and have been grouped. They are generally exceeded by transit speed, so transit speed captures more design requirements.

- **Test depth**: The maximum unrestricted depth to which NR-2 may routinely operate.

- **Acoustic quieting**: Broadband and narrowband acoustic noise levels as a function of speed.

- **Magnetic quieting**: Electromagnetic noise reduction, usually achieved through deperming/degaussing or installed systems.

- **Ability to operate on or near the bottom**: The ability to place the ship safely on the seabed without operating restrictions on ships.
system or to operate effectively in proximity to the bottom without restrictions on ships systems while maintaining positive control of the ship under all anticipated sea conditions.

- **Ability to reposition on or near the bottom**: The ability to reposition reliably and accurately (including rotating within ship’s length) while operating on or near the bottom.

- **Under-ice capability**: Ability to operate safely under the ice includes the ability to penetrate thin ice and emergency (backup) propulsion capability as well as the ability to ice pick.

- **Ocean interface**: Any large area exposed to the ocean either across the pressure hull boundary or accessible/manipulable outside the pressure hull—generally used to refer to the ability to retrieve objects from outside to inside the pressure hull.

- **Offensive weapons**: Permanently installed capability to employ undersea weapons, such as torpedoes.

- **Shock hardening**: Ability to maintain operational capability after sustaining a defined shock value to the ship.

- **Endurance**: Maximum period of operation without external support.

- **Payload**: The support equipment carried on the platform, which defines the range of mission capability.

- **Flexibility/adaptability**: Ability to accommodate additional missions without redesign or modification to the basic platform (includes plug-and-play manipulators, ROVs, external payloads).

- **Redundancy**: The incorporation of design considerations required to eliminate single-point failure modes.