



Submission Criteria

Naval Special Warfare Center (NSWCEN) requires the ability to monitor candidates throughout their training at various training environments at our schoolhouse to monitor human performance and ensure utmost safety. NSWCEN is seeking commercially available off-the-shelf solutions (COTS), “device(s),” described below, to meet this requirement.

Specifications: A high-performance monitoring device that can be worn by candidates during high-performance training that delivers streaming of physiological data. The device(s) shall be capable of being worn on the body during physically intense training to include maritime, land, and classroom. The device(s) must be ruggedized sufficiently to function outdoors and indoors and when subjected to impact. Performance environment to include shatterproof, impact and water-resistance, sand/dirt, and extreme temperature fluctuations. Devices can be patches, watches, straps, and others. Shall meet or be able to meet at procurement time Military standard 810.

Shall/Critical/Minimally:

Heart Rate
Training Time
Total Distance Covered- feet and meters
Cadence-total steps
Sleep- duration and quality
Running Symmetry/Movement Efficiency

Essential:

Impact Detection/Collisions
Energy- Calories

Enhancing:

Electrocardiogram (EKG) measured every 4-24 hours
Heart rate variability (HRV)- Detected Beats
Oxygen (O2) Saturation
Acceleration- GPS
Deceleration- GPS
Velocity-GPS
Location-GPS
Others may be considered.

Battery life in fully operational mode (i.e. recording and transmitting real-time data) shall be at least twelve (12) hours optimally twenty-four (24) hours on one charge. Self-charging is optimal/preferred.

Shall have the ability to withstand cleaning/sanitization. Government prefers nonproprietary.

Shall have the wireless data transfer capability. All data shall be encrypted with a minimum 128-bit AES encryption in transit and at rest.

Shall have the ability to communicate directly with the Monitor Networking/Data Hub (ref 1.3) via a local Government network or local stand-alone network.

Shall include all peripheral power supplies .and cabling required to power and charge above listed devices, compatible with standard USB, or USB-C, or USA 120VAC power outlets or portable COTS battery charging devices (USB or wireless).

Shall include a standard commercial warranty or federal warranties in accordance with FAR 46.7.

Networking/Data Hub: (i.e. “Aruba routers/Bluetooth”)

The data hub(s) shall provide the ability to facilitate direct and secure wireless data transfer from:

Up to 600 wireless monitors operating concurrently in support of the high-performance monitoring devices.

Up to 75 wireless monitors operating concurrently in support of the networking/data hub.





To host a browser-based application (dashboard) to display data collected from connected devices on a Government or local area network (LAN).

The data hub(s) shall be fully functional on a stand-alone local network (“offline”) and shall not require any connection to the global computer network, “internet” for full functionality.

The data hub(s) shall store data only on a Government local network and not transmit or upload to vendor or 3rd party Cloud infrastructure.

Networking/Data Hub software and/or firmware updates shall be conducted on-site and not require external internet connection.

It is anticipated network and data hub software support would be infrequent and not routine. Minor set up and training expenses are also anticipated.

Browser-based Application: Hosted on the Networking/Data Hub, accessible via web browser, to provide a dashboard that provides livestreams data and/or ability to extract data to .csv file.

Prohibitions:

Shall not require an intermediary device (phone, tablet, laptop, 3rd party watch, monitor, etc) or paired mobile application for full functionality.

Shall not require licenses that have annual subscription costs.

Shall not require account creation with individual user PII and/or PHI.

Shall not rely on mobile applications or 3rd party Cloud infrastructure.

Shall not transmit or upload to vendor or 3rd party Cloud infrastructure through themselves or an intermediary device.

