Smart Installations
Leveraging current initiatives for improved readiness and efficiency

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Opening thoughts

• Smart ______________
• Why?
• Why now?
Navy Region Southwest Smart Shore – Why/Why Now?

Smart Shore is the next step in the evolution of shore operations following a series of:

- Organizational Changes
- Event Driven Changes
- Technology Advancements
Navy Region Southwest Smart Shore

Components

Smart Base and Smart Grid are two critical components that encompass N3 and N4 support to the Fleet. Smart Base aligns the existing Smart Base and Smart Grid components to provide an integrated shore installations operation.

Smart Base components include physical security and emergency response (N3). In reaction to the September 11, 2001, attacks, physical security funding was increased to provide an improved force protection posture. ROCs were established to improve emergency management coordination and were subsequently utilized in response to natural disasters in the following years. In 2012, NRSW successfully consolidated regional dispatch, which resulted in efficiencies through greater communication and collaboration.

Smart Grid components include industrial controls, demand response, energy management, and microgrids. Since 2000, through Public Works Center, San Diego, and then NAVFAC SW, NRSW has been growing a direct digital control, area-wide energy management system.

Smart Base: The integration of security and emergency management systems with remote sensing assets in a cyber-secure network to allow for a remote coordination of the deployment of assets in response to operational demand signals.

Smart Grid: The networking of energy consumption, energy production, and energy distribution devices to manage demand, load, and maintenance in near real-time while maintaining cyber-security.

Microgrid: An electrical system that includes multiple loads and distributed energy resources that can be operated in parallel with the broader utility grid or as an isolated system (known as islanding).

Smart Shore: The integration of operations, energy, and networking assets to provide synchronized command and control and enable a unified approach to shore management that reduces cost and optimizes resource allocation in a cyber-secure environment.

Benefits

• Cyber-Security: The accredited IT architecture ensures cyber-security of the industrial control system. After accreditation, network staff continue to monitor and patch data transport.

• Enhanced Technology: Improved technology will enhance operational capability with an integrated common operating picture.

• Interoperability & Scalability: An interoperable ShOC allows for a scalable response to N3 and N4 events. The ShOC’s collaborative, information-based workforce results in $5 million in annual savings.

• Near Real-Time Monitoring: The networked N3 and N4 systems provide a common operating picture that integrates the various data points into a single user interface in near real-time.

• Correctly Sized and Configured Facilities: With a correctly sized and configured state-of-the-art ShOC facility, NRSW will realize 10-year savings of over $2M in utilities and over $400k in sustainment.

• Improved Financial Bottom Line: Initial ShOC investments in people, processes, and technology enable NRSW to realize an annual operational savings that results in an eight-year payback period.

Networked IT architecture enhances command and control of the Navy Shore by enhancing situational awareness of equipment, detecting and identifying conditions that could lead to problems, and delivering the right information to the right people at the right time.

System Integration

Integration between the vast array of business systems provides a holistic view of asset inventory, which is vital to effectively manage and maintain assets. Integrating multiple disparate data points into a common user interface allows the ShOC operators to turn data into actionable intelligence for optimized decision-making. Since multiple disparate systems will connect into a single network via the middleware panel, it is simple and adaptable enough to integrate future systems and technology as they come online.

A consolidated footprint allows for enhanced interoperability of personnel and the equivalent operational capability with fewer ShOC personnel when compared with the status quo. This leaner and consolidated work environment will support the ShOC’s collaborative, information-based workforce; reduce stove-pipes; and increase communication and information sharing. ShOC, NRSW will realize an annual savings of over $5M in personnel costs by operating a leaner and more robust ShOC from a consolidated facility.
Thoughts

• The menu of smart options is expansive
• Budget restrictions will force focus
  – How much “Smart” can we afford?
• Program office level support is needed
  – The why/why now doesn’t compete with current needs
  – Integrated solutions are difficult to implement
• Positive movement
  – Navy Facilities and Energy Operations Centers