

# Human Capital Digital Dashboard

## NAVSEA's Future Method of Measuring Community Health

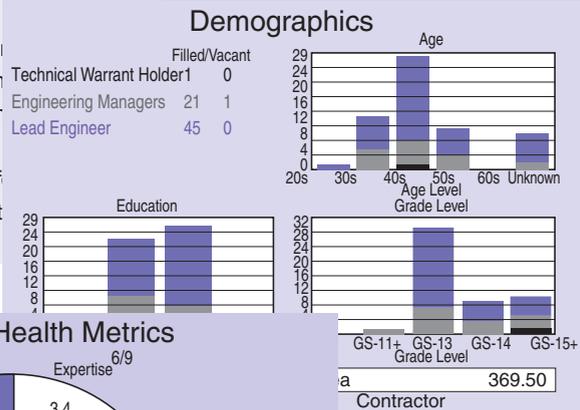
Matthew Tropiano Jr.

**W**hat if, in one view, you could: spot your short-term critical staffing shortages; your long-term health concerns including tools, standards and processes; where you lack the right skills and the right number of crucial personnel? What if you could predict how many engineers you're going to need, where you will need them, and what critical skills they will need to possess?

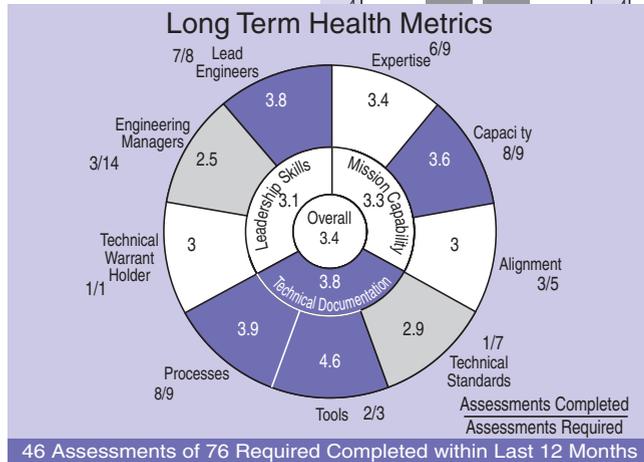
### Sample Human Capital Digital Dashboard Reports

#### Warrant Area Problems

- Vacancies: EM – AFTP Access Control
  - 1 of 7 Tech Standards Assessments Complete
  - 3 EMs within year of age 57
  - 11 of 19 Technical Standard Assessments
  - 18 of 34 Leadership Assessments Complete
  - 17 of 23 Mission Competency Assessments
- TWH Notes:
- Inadequate armor for patrol vessels in fleet
  - Improve situational awareness for Fleet



The Human Capital Digital Dashboard (HCDD) is giving the Naval Sea Systems Command a Web-based “precision-strike” human capital strategy tool that enables NAVSEA’s leadership and technical authorities to quickly locate the engineers assigned to a given function or ship system and assess their leadership abilities, mission capability, and technical documentation health. [Editor’s note: An executive dashboard is a Web-based application that gives a graphic representation in meter, chart, or graph format of complex and usually hidden organizational data.]



HCDD enhances NAVSEA’s responsiveness in the face of emergent problems and helps the Navy to find people with the right expertise when the need arises to equip the engineering workforce in particular areas of knowledge, skills, abilities, and experience. Overall, HCDD provides an accurate picture of technical authority and accountability within the NAVSEA engineering line of business.

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### Technical Authority and the Impact of Downsizing

“The most important thing we do at NAVSEA is overseeing Technical Authority. Technical Authority is that intellectual capital that allows you to operate the Navy safely, to operate equipment and systems the way you should, to maintain standards ... but it is also critical if you are going to be a peer of industry.” Those are the words of Vice Adm. Phillip M. Balisle, former NAVSEA commander.

Technical Authority is the process by which NAVSEA assigns authority, responsibility, and accountability to es-

establish, monitor, and approve technical products and policy. Essentially, technical authority establishes the “go to” persons—the authoritative experts for the field and fleet.

Technical Authority was implemented to address the potentially precarious situation in which technically driven agencies like NAVSEA and NASA found themselves during the downsizing of the late 1980s and early 90s. The downsizing left the agencies with not only a reduced work force, but also a reduction in their mission-critical competencies. Agencies downsized across the board without adequately addressing the essential competencies needed to accomplish their missions.

According to a Government Accountability Office report (GAO - 04 -753): “DoD performed this downsizing [from 1989-2002] without proactively shaping the civilian workforce to ensure that it had the specific skills and competencies needed to accomplish future DoD missions.” This shortfall has been recognized, and we see today the emergence of a chief human capital officer and human capital strategy, not only to protect and maintain the mission critical competency areas, but also to develop them for the present and future.

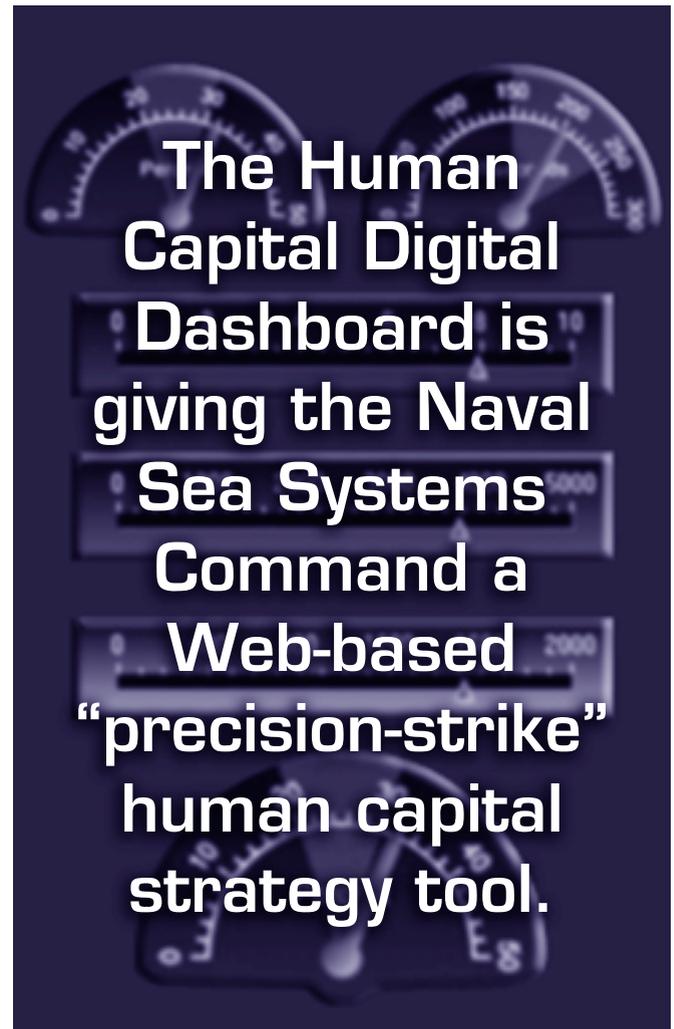
In August 2003, an independent review team (commissioned by Balisle) formed to assess NAVSEA’s Technical Authority with a particular emphasis on the problems identified at NASA by the Columbia Accident Investigation Board (CAIB) Report. The CAIB (directed by then Rear Adm. Paul E. Sullivan, who is now NAVSEA commander) found that NASA failed to maintain Independent Technical Authority and pointed out:

*Success of the warrant holder system as an embodiment of Independent Technical Authority is limited unless sufficient people with necessary technical experience and depth are available. The requisite cadre of talent must be constantly renewed. Up and coming engineers with appropriate technical and leadership experience, knowledge and skills need to be cultivated to replace existing warrant holders. Gaps in the depth of technical coverage will diminish respect for the concept as a whole and create the potential for unsafe operations.*

The mission of the independent review team was to ensure that NAVSEA was not creating problems similar to those identified within NASA.

### **Development of HCDD**

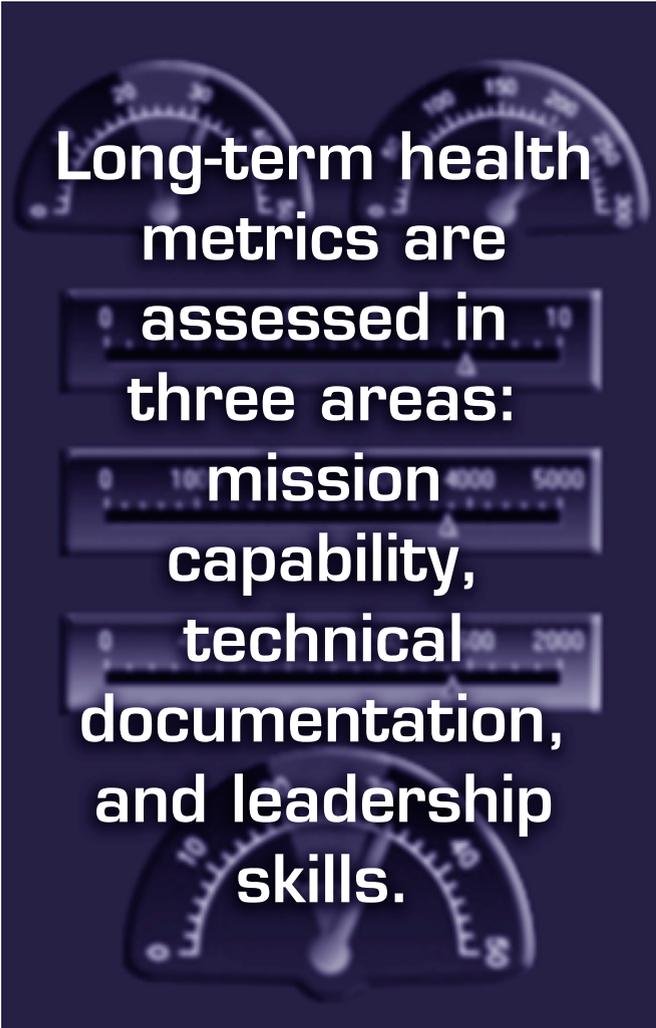
With no adequate metric to measure the effectiveness of Technical Authority and the stewardship of its essential technical competencies, NAVSEA realized that it must define a methodology to assess the health of its science and engineering community and its ability to sustain and grow skills, alignment, and capacity critical to the support of “the current Navy, the next Navy, and the Navy after Next.”



Optimally, the methodology would also enable the determination and development of career tracks leading to technical warrant-holder status.

NAVSEA’s answer to this mission was the Engineering and Technical Authority Support Network, which now falls under the umbrella of the Human Capital Digital Dashboard. The HCDD encompasses the engineering community and the contracting community, and it is being considered in the financial management, program management, and logistics communities.

The tool was introduced in early 2004 in NAVSEA’s engineering and technical authority community, which is aligned in five levels. The top level is the NAVSEA commander—the warranting officer. The second level is the deputy warranting officers who are usually deputy commanders. The three remaining levels of the “pyramid” are technical warrant holders (TWHs), engineering managers (EMs) and lead engineers (LEs). The TWH relies upon support of EMs, and LEs within his or her warranted technical area. The technical warrant structure enables NAVSEA to retain a set of core competencies and technical capabilities in its people, and this tool helps charac-



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terize, describe, and summarize the delegation of responsibilities and accountability over specific systems, equipment, standards, tools, and processes. HCDD maps the current state of NAVSEA's engineering capabilities and provides long-term health metrics.

Specifically, HCDD generates metrics in the output of a dashboard visually designed to depict the long-term health of each warranted technical area. The dashboard provides NAVSEA senior leadership with an unprecedented insight into the current state of TWH and engineering capabilities and provides a look at long-term health. HCDD presents a snapshot of the following:

- The alignment of engineers with the technical authority chain of command
- Technical documentation—specifications, standards, tools, and processes
- Demographics—grade, education, and age
- Skills—experience, certifications, and other special abilities
- Health metrics—assessments of leadership skills, mission capability, and technical documentation
- Problem areas—critical vacancies, anticipated retirements, substandard assessments

- Long-term health actions—identified by the TWH who is responsible for maintenance and improvements.

Long-term health metrics are assessed in three areas: mission capability, technical documentation, and leadership skills.

*Mission capability* indicates the current and future ability of NAVSEA to accomplish its mission and is further divided into three areas:

- Expertise—Does NAVSEA currently have the right skills to accomplish the mission in that technical pyramid? Is NAVSEA developing the right skills for the future?
- Capacity—Does NAVSEA have the right number of skilled people in that technical pyramid? Does NAVSEA have a pipeline to replenish those skilled people?
- Alignment—Do organizational interfaces support effective and efficient engineering? Are NAVSEA's engineers effectively and efficiently aligned within their technical authority chain of command?

The health of *technical documentation* for standards, tools, and processes is assessed for its currency, quality, and liability:

- Have the standards been looked at recently or examined in the past five years? Do the standards need to be updated?
- Can the tools and processes fulfill NAVSEA's mission? Do the tools and processes need to be upgraded?

The *leadership skills* are measured for each TWH, EM, and LE for each pyramid. Are engineers developing the competencies they need to advance in the engineering community and eventually become TWHs? The competencies are:

- Setting technical standards
- Technical area expertise
- Ensuring safe and reliable operation
- Systems engineering expertise
- Judgment in making technical decisions
- Stewardship of engineering capabilities
- Accountability and technical integrity.

## HCDD's Future

At present the HCDD is addressing the needs of NAVSEA's engineering community. The vision and expectation for HCDD is to address and predict needs of all communities—financial management, program management, and logistics—throughout all the Navy's systems commands, for the current Navy, the Next Navy, and the Navy after Next.

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