2011 Integrated Warfare Systems Conference

Rear Admiral Jim Shannon
December 6, 2011

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In 1865, the Navy owned 454 vessels.

In 1866, the Navy owned 320 vessels.
- Only 246 active. The others were being prepared for disposal.

In 1885, the Navy owned 39 vessels.

The number of ships did not significantly increase until the 1890's.

The only war that hasn’t involved a major drawdown was the Korean War.
The bureaucratic structure of the Navy incentivized those with more traditional skills to stay in the Navy and those with engineering skills to leave.
Civil War Technology: LIGHTNING (c. 1869)

No further US Navy torpedo boat development until 1886.
Admiral David Porter

A return to the old customs
The Herreshoff Torpedo Boats

Innovators of the time
A Brother’s Agreement:

- Borrow no money
- Best workers & material
- Build only to our designs
- Sell our designs to no one
- Products advertise themselves
- Contract only with those willing to pay the price

“SBIR” in a different time...
Herreshoff Manufacturing Co.
1868-1887

Herreshoff Manufacturing Company,
BRISTOL, RHODE ISLAND.
SOLE MANUFACTURERS OF THE
"HERRESHOFF PATENT SAFETY COIL BOILER."
Manufacturers of
STEAM VESSELS, YACHTS, LAUNCHES,
PORTABLE, STATIONARY AND MARINE ENGINES.
PUMPS, PROPELLER WHEELS AND SAFETY VALVES.
Manufactury and Main Office at Bristol, R. I., U. S.
The Technology

Coil Boiler

Compound Engine

Engineered Design Series

Model Testing
Attracted national publicity as a yacht
Congress authorized $25,000 for purchase in 1887 for “experimental purposes”
First bow torpedo tube
Newport Torpedo Station test vessel until 1911
• Congress authorizes 3 boats to be built to Navy specs

• HMCo wins 2 to be built per a “Confidential” letter
“Herreshoff is as much a master in boat building in general as Edison is in the field of electricity…it is only grief that Herreshoff does not build all our boats or that we do not copy his models and fittings.”

- Lieut. A. P. Niblack, USN; SNAME Transactions 1899
M
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Building Trust and Transparency is Critical
Assets

Intellectual Capital of the Navy…
Yesterday… and Today…
AWS-SPY Readiness Task Force: 48 actionable recommendations
- Improve training, restore ISEA support, SPY MER, sparing review

Aegis BMD Readiness Task Force: 41 actionable recommendations
- Run sparing model for BMD ships, several areas targeted for improvement

Navigation Readiness Task Force: 26 actionable recommendations
- Mapped to Navigation Vision 2025 and Tasking Letter Wholeness

SEA-21 and PEO IWS collaborated to coordinate the myriad of priorities to sustain the Navy’s surface ship capability
Environment

Lifecycle Management Works Across Multiple Organizations
The Pacific Ocean covers 46% of the Earth’s water surface.
• Industry and government all have important roles to play...now and in the future.

• We have to improve the government-contractor relationship by making each party more accountable to the other.

• This is a team effort -- our doors are open
And we count on our Industry Partners to help us with the cost challenge

<table>
<thead>
<tr>
<th>Total In-House Capacity</th>
<th>Outsourced Workload</th>
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<tr>
<td><strong>Core Capability = Gov’t Role</strong></td>
<td><strong>Industry Role</strong></td>
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<tr>
<td>Work Government Must Do</td>
<td>Design &amp; Build</td>
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<td>Technical Pipeline</td>
<td>Unique Skills/ Capabilities</td>
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<tr>
<td>Work Industry Can’t or Won’t Do</td>
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<tr>
<td>Best Value</td>
<td>Economic Viability</td>
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<tr>
<td>- Technical Authority</td>
<td>- Produce end products and services</td>
</tr>
<tr>
<td>- Smart Buyer</td>
<td>- Only source</td>
</tr>
<tr>
<td>- Independent Assessment</td>
<td>- No compelling reason for government source</td>
</tr>
<tr>
<td>- Avoid technical surprise (innovation)</td>
<td>- Not available in govt &amp; critical to successful task completion</td>
</tr>
<tr>
<td>- Directed by higher authority</td>
<td>- Efficient Production</td>
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<tr>
<td>- Title 10</td>
<td>- Commercial gains</td>
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<tr>
<td>- Hands-on work</td>
<td>- Cost</td>
</tr>
<tr>
<td>- Sustain Knowledge Areas</td>
<td>- Schedule</td>
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<tr>
<td>- Last source</td>
<td>- Performance</td>
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<tr>
<td>- High risk</td>
<td></td>
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<tr>
<td>- Not profitable</td>
<td></td>
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<td>- WFPP</td>
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<td>Best Value</td>
<td>Economic Viability</td>
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<tr>
<td>- Data Rights</td>
<td>- Hands-on work</td>
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<td>- Design Disclosure</td>
<td>- Programmatic</td>
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<tr>
<td>- No fees</td>
<td>- Cost</td>
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<tr>
<td>- Life Cycle Maint.</td>
<td>- Sustain affordable rates</td>
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<tr>
<td>- Cost</td>
<td>- Performance</td>
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<tr>
<td>- Schedule</td>
<td>- Generate sufficient OH</td>
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<td>- Performance</td>
<td>- Sustain affordable rates</td>
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<tr>
<td>Economic Viability</td>
<td></td>
</tr>
<tr>
<td>- Generate sufficient OH</td>
<td>- All other technical work</td>
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<tr>
<td>- Sustain affordable rates</td>
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<tr>
<td>- Work is needed to sustain critical assets that are fragile in the private sector</td>
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</table>

**Total Force Requirement**

*Finding the right balance to optimize Navy Fleet*
## Definitions

### Criteria for In-House Performance

**Technical Authority:** Is the work specifically required to establish technical standards, tools and processes; and to ensure adherence to those standards? Does the work require an independent evaluation and certification of suitability or effectiveness of warfighting solutions with respect to stated requirements?

**Smart Buyer:** Does the work require delegated or derived authority and the resources to initiate actions or activities? Does this work involve selecting and authorizing a contractor/governmental entity to produce military products or services?

**Independent Assessment:** Is the work needed based on the delegated or derived authority plus the ability to judge the absolute or relative worth, quality or value of an activity, product or process relative to national security requirements?

**Avoid Technical Surprise (Innovation):** Is the work needed to advance a critical warfighting capability that is needed but does not exist today, and for which no private sector entity is willing to invest? Is the work needed to provide solutions to complex technical problems for which government must have a strong technical understanding and involvement? Does the work needed to anticipate and respond to current and future National needs?

**Technical Pipeline:** Will this work provide "hands-on" engineering design and development experience necessary to grow future inherently governmental technical decision makers (smart buyers, honest brokers, technical authority warrant holders)? Will this work help to sustain knowledge areas critical to a needed in-house technical capability?

**Last Source:** Does the work require access to unique or national facilities that are not available in Industry (due to the associated facility maintenance and modernization costs)? Is industry not able to perform is work (due to issues of propriety, security, or special expertise only available in government)?

**High Risk:** Is there a high risk of contractor default? Is there high risk to warfighting capability should the contractor default? Is industry unwilling to accept the work because they are unwilling to accept potential liabilities? Does the work ensure interoperability of warfare systems and integrated warfighting capability?

**Not profitable:** Is the work not able to be performed by a private sector source due to profitability issues by the private sector?

**Work For Private Party:** Is the work within your mission area and being requested by a contractor because no similar capability exists in the private sector; and can be defined by a one-time product or service with a specific deliverable?

**Best Value:** Can results be achieved soonest by employing the Government source while maintaining the least cost and delivering the greatest overall value?

**Economic Viability:** Will performing this work in-house help to sustain a needed, but fragile National asset, technical capability and/or Warfare Center Division.

### Criteria for Outsourcing

**Design and Build:** Is the work appropriate for industry to perform; i.e., it involves support to the government decision making roles, it exceeds the level needed to right size the in-house technical capability, and meets the following conditions:
- Is a commercially available function/service
- The commercial source has a good track record
- The market is sustainable over time (sufficient workload and profit incentive for industry)
- The work has a definable outcome or product and is measurable

**Unique Skills/Capabilities:** Is Industry the only source for this work and is there no compelling reason to establish a government source as an insurance policy in the case of a national crisis? Does industry provide needed skills/capabilities that are critical to the successful completion of this task and are not available in government?

**Best Value:** Is this work available in the private sector and is Industry the best value in terms of cost, schedule and performance?

**Economic Viability:** Is this work needed to sustain critical assets that fragile in the private sector.