CSBA
Center for Strategic and
Budgetary Assessments

Sustaining the U.S. Defense Industrial Base

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CSBA — Key Findings (2011)

The U.S. Defense Industrial Base (DIB) does not function like a "normal" free market with many buyers, many suppliers & market-driven price competition
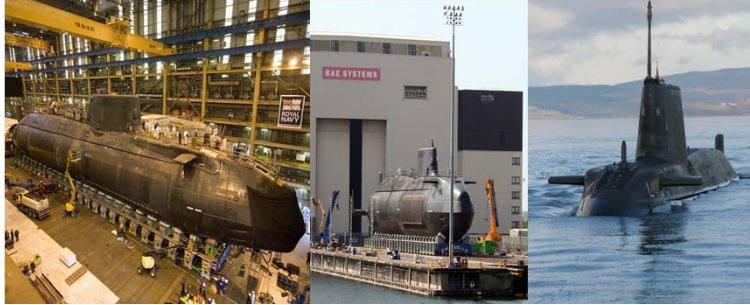
- It is **highly regulated** by FARs, DARs, ITAR, Congress, etc.
- It has a **single** (monopsony) **customer**—the U.S. government (**also the regulator**)—& a few oligopoly suppliers in each market segment
- **Market concepts** such as "competition," "price," "buyer" and "seller" **do not apply** (Merton Peck & Frederick Scherer, 1962)

The U.S. government & DoD have never had a coherent, long-term strategy for managing the DIB as a vital strategic asset

- After Les Aspin's 1993 "last supper," the defense industry **merged 37 primes into 5** (LM, NG, Boeing, GD & Raytheon)

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Sustaining Critical
Sectors of the U.S.
Defense Industrial Base

BARRY D. WATTS
AND TODD HARRISON

CSBA — Why Have a Strategy?

Because without a strategy you may lose critical capabilities
- "If you allow a unique skill set to atrophy, it is a very costly and expensive process to recover it" (Karl Hasslinger)

Consider the Royal Navy's *Astute*-class SSN:
- BAE Systems selected to build the new submarine in 1997
- The British did not have the needed design & production capabilities
- Brought in GD Electric Boat (contracts totaling $53 million in 2003)
- Costs: £1.8 billion cost overrun & HMS *Astute* 4 years late

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CSBA — A Guiding Principle

A DIB strategy should first decide what to keep for the long haul rather starting with what to reduce or cut for the current budget cycle

The alternative is to risk losing the DIB's "crown jewels" to recurring bouts of short-term, across-the-board budget cutting

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CSBA — Backgrounder Context

- **The DIB is a diverse array of companies, large & small, with many sectors & tiers (DASD/MIPB); also with growing global ties**

- **DoD faces tightening fiscal constraints (OCO going away, sequestration, political gridlock, etc.)**

- **DoD faces a growing array of current & emerging security challenges (jihadist extremists & insurgents, the "Arab spring," Iran, China, Russia, etc.)**

- **Can the concept of core competencies help to decide what to keep?**

- **What is a core competency?**

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CSBA — Core Competencies

- ***Definition*: A combination of technology, manufacturing base, skilled manpower, training, focus, adaptivity, & experience that enables an organization to accomplish something of strategic importance better than rivals** (Cockell, Martin & Weaver, SAIC for OSD/NA)

- ***Characteristics* (C. K. Prahalad & Gary Hamel*):*
  - Provides **significant value** to customers
  - **Applicable across many "product lines" (or mission areas)**
  - **Difficult** for rivals **to replicate**
  - Costly to recover if lost

- ***Examples*:**
  - Honda: engines/powertrains & fast product cycle times (1980s)
  - Intel: Memory chips (until 1985); microprocessors (after 1985)
  - DoD: Long-range precision strike

- **The DIB's core competencies should support DoD's**

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CSBA — Competencies & Strategy

"Few companies are likely to build world leadership in more than **5 or 6** fundamental competencies. A company that compiles a list of **20 to 30** capabilities has probably not produced a list of core competencies."

— Prahalad & Hamel

- A DIB strategy based on **20 or 30 "top priorities"** isn't strategy
- Useful lists of DoD or DIB core competencies must be **short—less than 10**

CSBA — DoD Core Competencies

1. Global non-nuclear precision strike
2. Flexible, effective nuclear forces
3. Capability to project & sustain combined-arms campaigns at the operational level of war
4. Access to & freedom of action in the global commons—at sea, in orbital space & in the electromagnetic spectrum (of which cyber is a part)
5. The cryptologic enterprise
6. Realistic combat training

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DIB Core Competencies

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1. **Precision weapons, including missiles for both strike & defense**

2. **Low-signature platforms such as stealthy air vehicles, both manned & unmanned, & nuclear submarines**

3. **Global ISR (reconnaissance satellites, GPS, UAVs, etc.)**

4. **Integrated battle networks that marry ISR with robust command, control & communications (C3)**

5. **The skills, procedures, tools & organizations for dominating the electromagnetic spectrum (including network attack, network defense & cryptologic skills)**

6. **Large-scale system & network-architecture integration**

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Fragility Testing

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Not every element in the supply chains underlying a DIB core competency will demand special attention or preferential investment

Deciding which elements do requires detailed mapping of the DIB (which only DoD can do)

Industrially Critical & Fragile Niches

Defense unique	No alternatives available at reasonable cost, schedule, and performance
Relevant to many platforms	Certain future demand
Uses highly skilled labor	Socio-political reliability limits non-U.S. sources
Design-intensive activity	High reconstitution cost
Suppliers' finances weak	Long lead item
Few firms in niche	Production near minimum sustaining rate
Variation in output imposes high costs	Suppliers' earnings depend on few program elements

Source: DASD(MIBP)

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CSBA — What We Want To Avoid

Losing critical defense industrial capabilities

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Defender of the realm: Britain's £1.2bn submarine - and typically, we can't afford it...

By ANDREW PRESTON in BARROW-IN-FURNESS
UPDATED: 09:27 EST, 22 March 2010

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This is the best submarine in the world. It is virtually undetectable, has reinvented the periscope and sonar, and doubles as a floating GCHQ. It also happens to be British. Its only weakness? At £1.2bn, we can't actually afford it

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CSBA — DoD/DIB Core Competencies

DoD

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3. Capability to project & sustain combined-arms campaigns at the operational level of war

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DIB

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