

THE SPEED OF WAR

*Improving the Speed and Cost of Turning
Fleet Requirements into Fleet Capability*

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Leadership: “The Speed of War”

“ Our enemies...are well-funded, *agile*...and seek the most dangerous weapons.”

“ We have seen the power and *speed* with which actions, images and ideas impact military operations. This *pace of change continually redefines the security environment* in which we operate.”

“ We must follow through— *rapidly execute* — on every plan, budget decision, strategy and policy...to better defend...our national interests.”

ADM Mullen as CNO in 2007
Chairman JCS

“Today on the battlefield, the IED fight, every 30 days, *its competitive edge has changed*. In the cyberwarfare fight, it’s about every 14 days we change the competitive edge. You have to build an architecture, because everything can’t be produced in 14 days or 30 days, “ Cartwright said. “But you have to build it with the *idea in mind that the unknown guy gets a vote*. And a lot of times that unknown guy now has the throw weight to really do you in.”

GEN Cartwright Vice CJCS 2009

**Are we organized to outpace
our adversaries?**

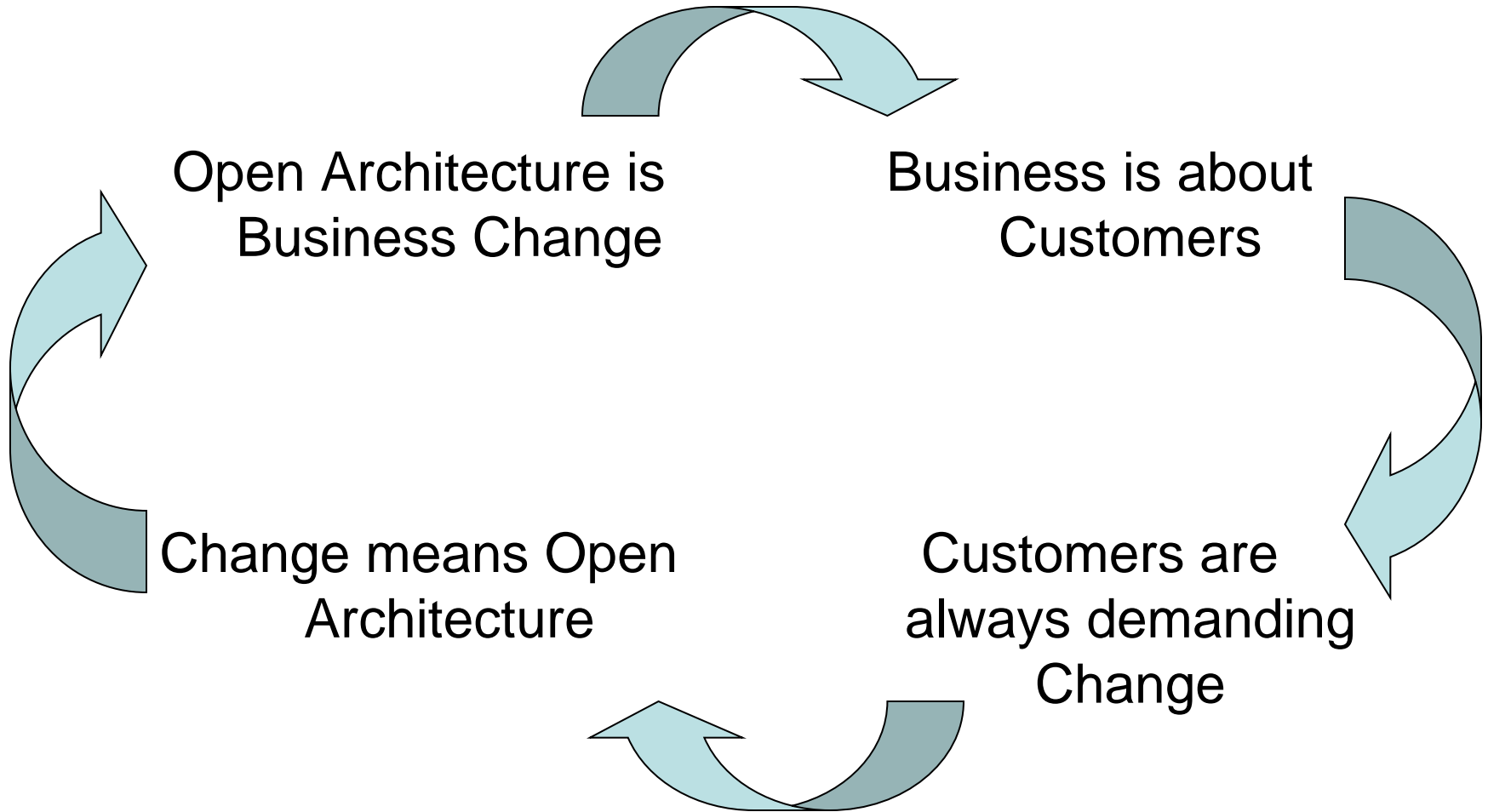
One Adversary... One Attack

“We bled Russia for ten years until it went bankrupt and was forced to withdraw in defeat. We are continuing the same policy to make America bleed profusely to the point of bankruptcy...”

Al Qaeda spent \$500K to carry out the attacks of September 11th, which caused America to spend more than \$500B. Every dollar of Al Qaeda defeated \$1M of America.”

Osama Bin Laden, Oct 2004

Assumptions



Commander's Guidance

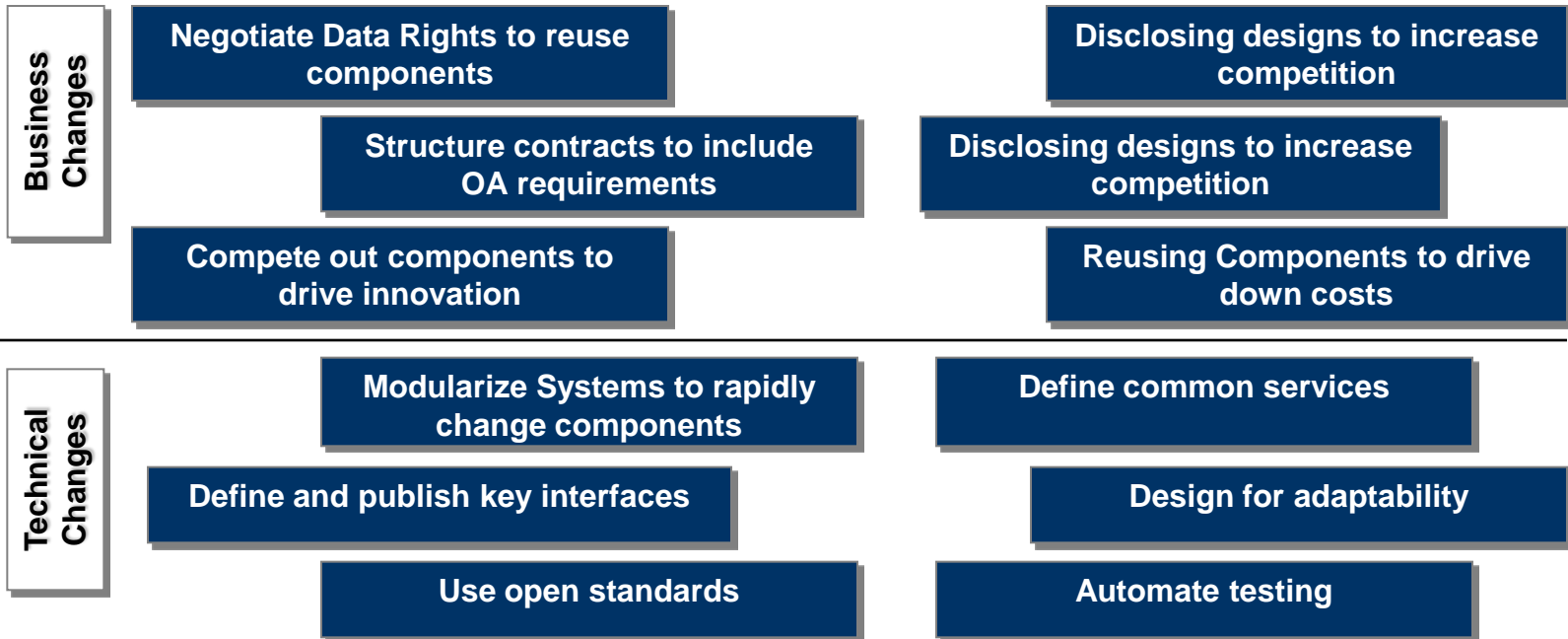
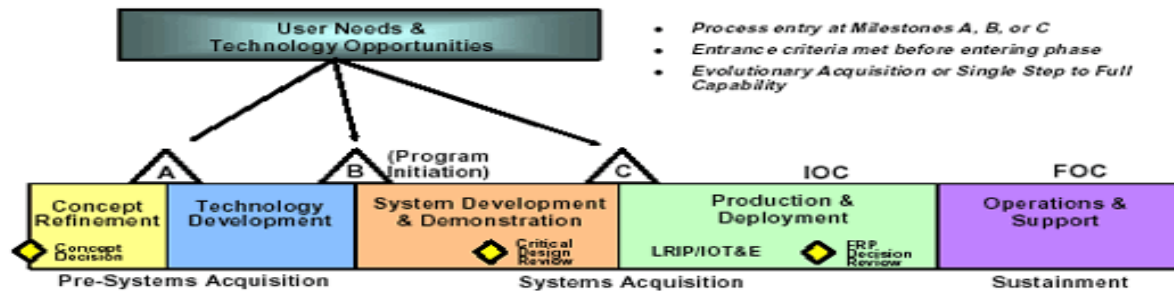
- ***ALIGNMENT to deliver:***

- *Right Capability – To fleet, not just new platforms*
- *Right Time – Not “usual time plus fixes”*
- *Right Cost – Not “usual cost plus inflation”*

- ***Enablers for Open Business Model:***

- *Contracting Officials – Contracts drive the business*
- *Cost Estimators – New cost models for modern techniques / business relationships*
- *Test & Evaluation – New tools, new methods, single up processes*

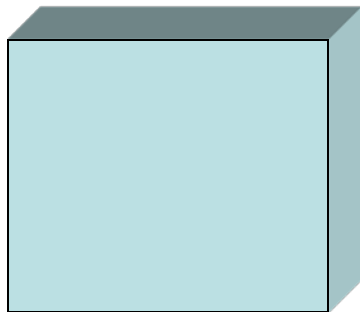
OA changes business process



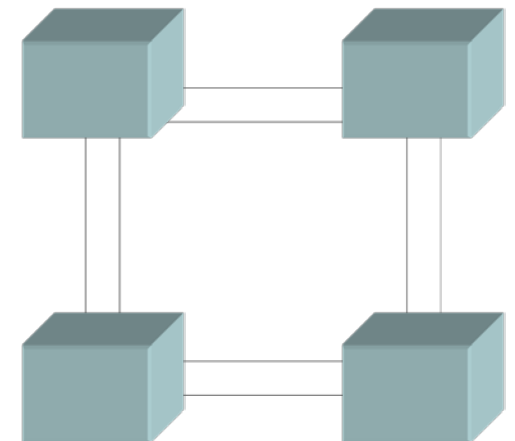
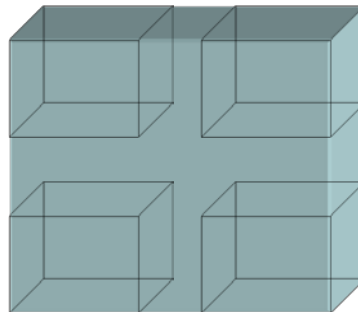
OA changes the way we design, build and support our systems

Degrees of OA transformation

- How much “OA” – Business Model exposure risk
 - To competition
 - To innovation



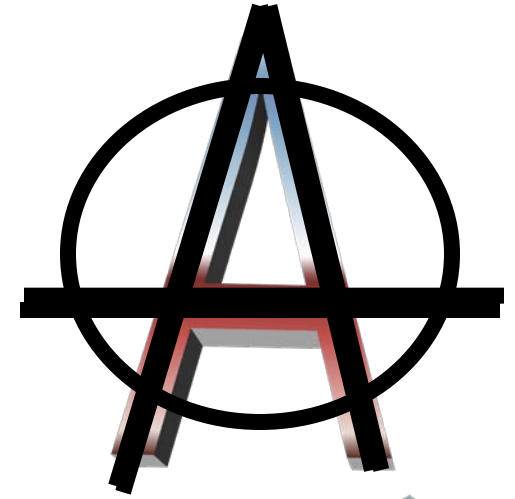
“AS – IS”



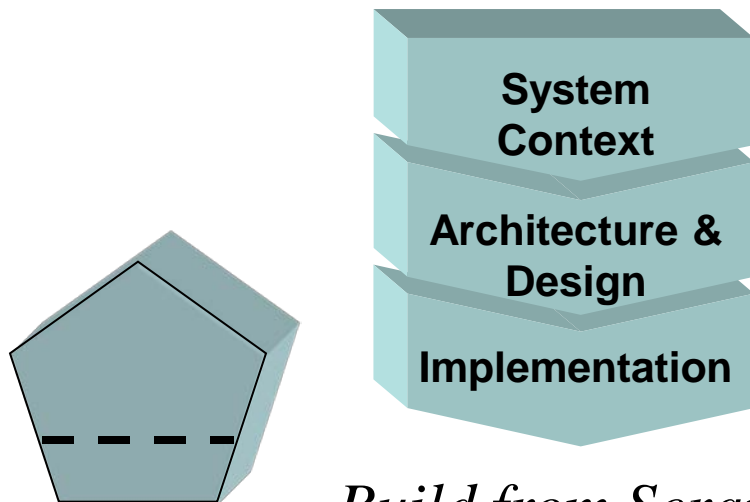
“TO – BE”

Darwinism?

- Survival of the Fittest...Open Anarchy?
- IP
 - Innovation
 - Infrastructure



Traditional Approach (Waterfall Development)

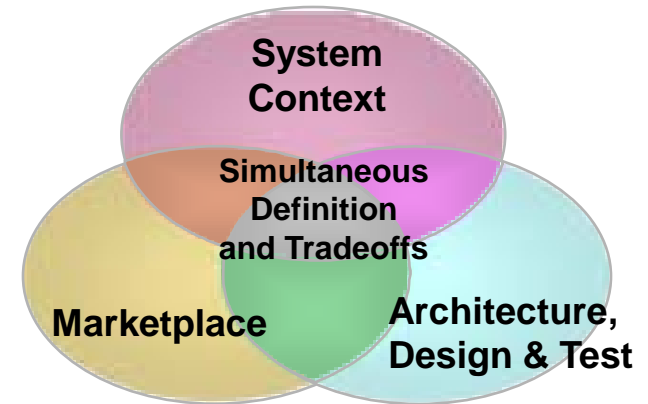


Build from Scratch

Surviving Change

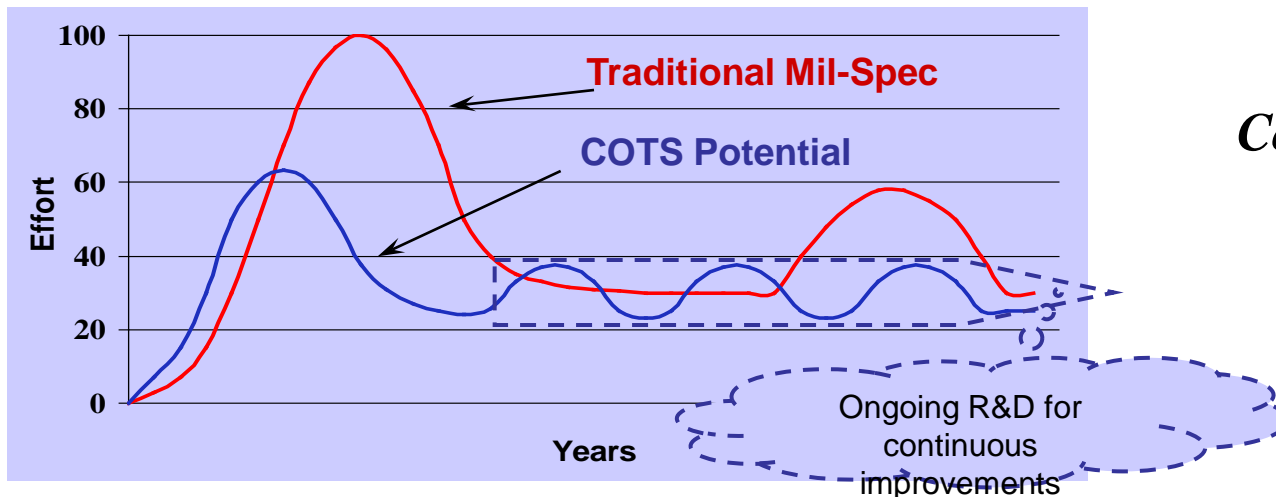
- **Change happens**
 - Change is both Risk & Opportunity
- **Cultural Shift**
- **Creative Destruction**
 - Innovation
 - IP

Open Architecture Approach (Spiral Development)



*Buy, Integrate,
Continuously Refresh*

Notional Program Life-Cycle



OA Take-away

- **Opportunity to Accelerate**
 - Innovation
 - Cost-effective
 - Market share
- **Time is the threat**
 - Linear
 - Cyclic
 - Marketplace

"War is the great teacher of innovation, the great stimulus to thought in military affairs," says Ashton Carter, USD AT&L. The present wars, he adds, "have challenged the cultures in all the services... There's a heated competition to be relevant."

QUESTIONS?

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Open Computing System Definition

Open computing system: A system that implements sufficient open specifications for interfaces, services, and supporting formats to enable properly engineered components to be utilized across a wide range of systems with minimal changes, to interoperate with other components on local and remote systems, and to interact with users in a style that facilitates portability.

— Open Systems Joint Task Force

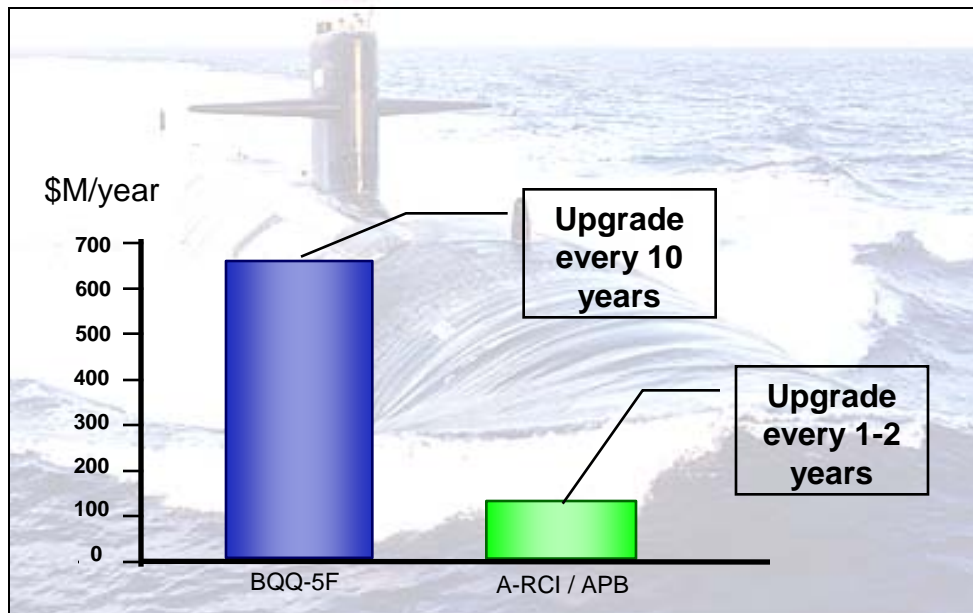
Key Open Computing System Characteristics:

- **Based on open, publicly available specifications** — preferably maintained as standards by a consensus process, e.g. by an internationally recognized governing group
- **Well-defined, widely used non-proprietary (standard) interfaces, services and formats**
- **Durable** (stable or slowly evolving) component interfaces that **facilitate** modular component **replacement** and addition of new capabilities
- **Upgradeable** through incorporation of additional or more capable modular components with **minimal impact** on the system

Open System Cost vs. Capability

- PEO Subs competed or assigned system sub-divisions and gained significant cost savings - while rapidly increasing capability.

Ten Year Comparison Development, Installation & Support Cost



"We refresh the hardware and upgrade software to continually improve capability and greatly reduce the amount of maintenance required by our Sailors. This business model, because of the regular tech insertions and APBs, allows us to rapidly introduce new capabilities into the fleet through an open architecture."

PEO Subs, June 2009

Open Business reduces infrastructure and total ownership costs while increasing capability