

# Open Systems Architecture Data Rights Breaking Vendor Lock



**AIR**



**C4I**



**MARINES**



**SPACE**



**SUBS**



**SURFACE**



***Nick Guertin***

***Director for Transformation***

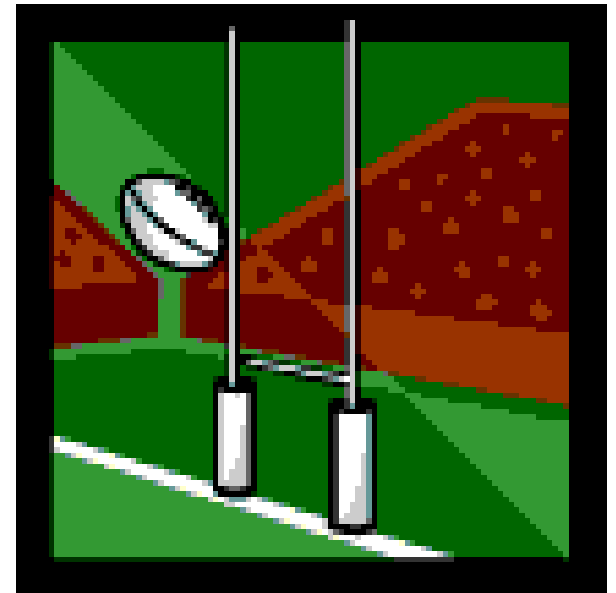
***DASN RDT&E***

***27 June 2012***

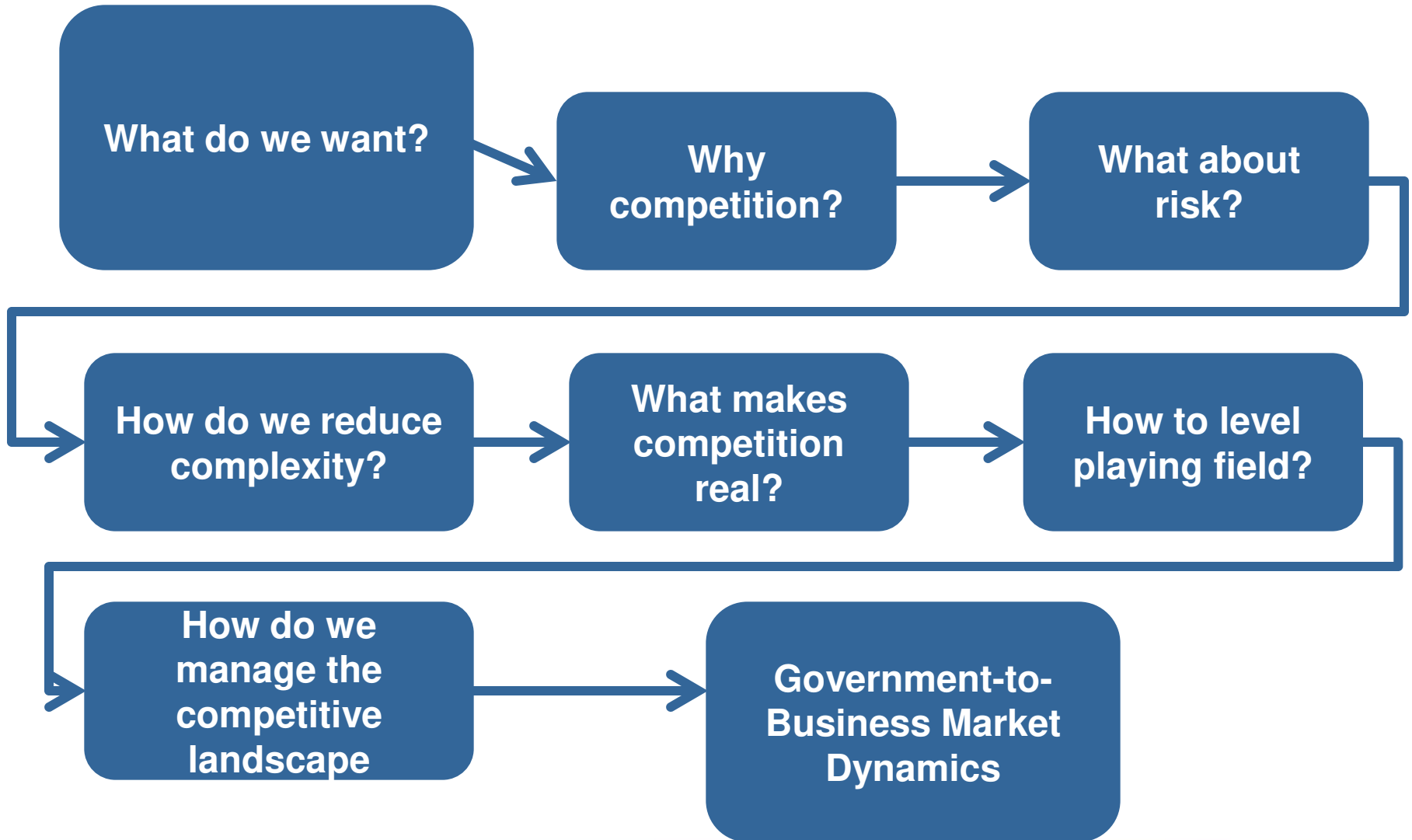
# Crafting a Market Place – It's Our Game

- We Write the Rules
- We Pay for the Players
  - Both Teams
- We Build the Stadium

How Can We Win?



# The Need for a New Market Dynamic



## Platform Focused Product



## Enterprise Product Lines



*Sunk Cost Versus Planned Investment*

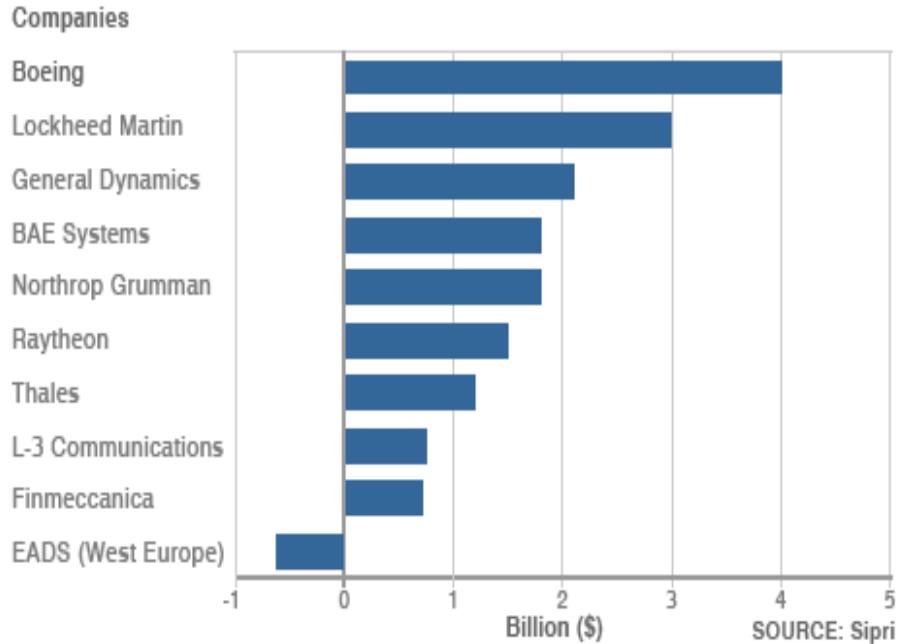
## Sovereign Acquisitions



## Collaborative Acquisition



# Industry Driven Decisions



# Strategically Crafted Market





## Many Different Voices



## Consistent Contract Language



## Market Entrance Barriers



## Level playing fields





## Obscure Landscape

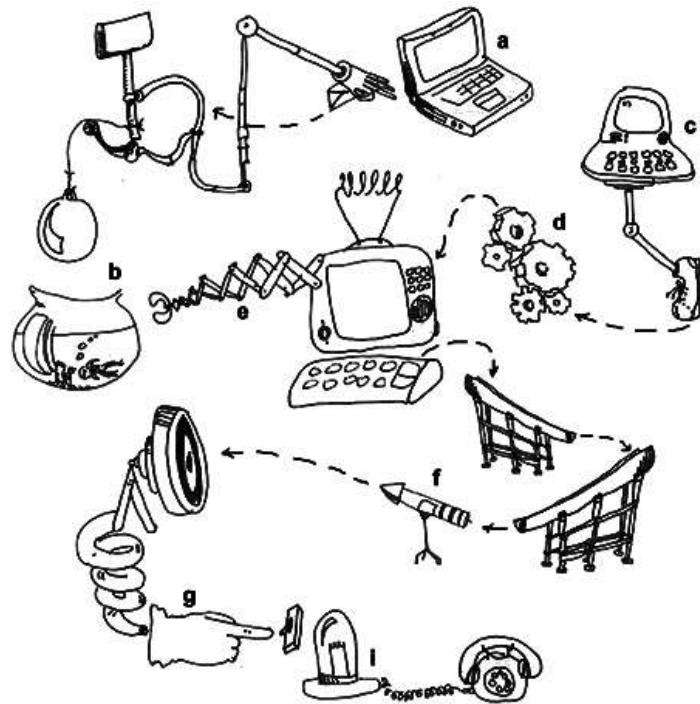


## Transparency = Opportunity



***Transparency reduces risk, increases reuse, and improves speed to the warfighter.***

## Technology-centric architecture



## Business-centric architectures



# We Need Innovation and Lower Price

*“Our destiny is, thus, in our own hands...  
with enablers such as ... open-architecture combat systems ...  
All operated by the finest sailors and Marines in our history.  
They fight as a single, interconnected, and cohesive team.*

*The Coming Naval Century  
Proceedings – May 2012  
Hon. Robert O. Work*

- Leadership Wants
  - Enduring Solutions
  - New Methods for delivering capability
- Industry Has the Ability – OA Report to Congress
  - SEWIP
  - UCS
  - FACE
  - A-RCI/SWFTS
- Industry is ready, the environment is set – Government must make these decisions



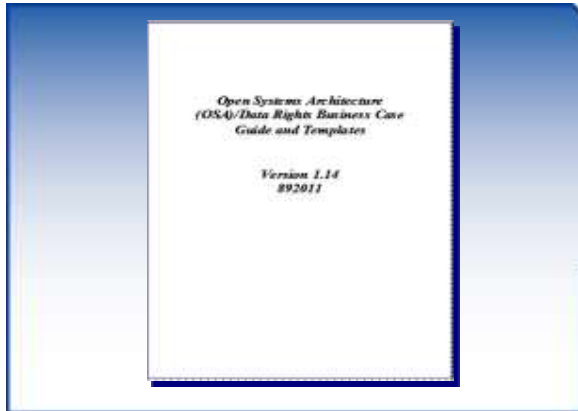
# Open Systems Architecture

## An integrated business and technical strategy for implementing systems in the DoD

- A Technical Architecture
    - Open standards, publishing of key interfaces, full design disclosure
    - Modular, loosely coupled and highly cohesive system structure
  - An Open Business Model
    - Transparency and leveraging of innovation across the Enterprise
    - Sharing risk, asset reuse and reduced total ownership costs
  - Data Rights = License Rights for Technical Data and Computer Software
  - Vendor Lock – Can't bring in new players or exercise acquisition choices
  - **A Successful Open System Architecture can be;**
    - Added to
    - Modified
    - Replaced
    - Removed
    - Supported
- ... by different vendors throughout the life cycle

# Coordinated Suite of Products

## DoD BCA Guide & Templates



1

## DoD OSA Contract Guidebook



2

## DoD Open Marketplace



3

## Strategic use of IP Rights



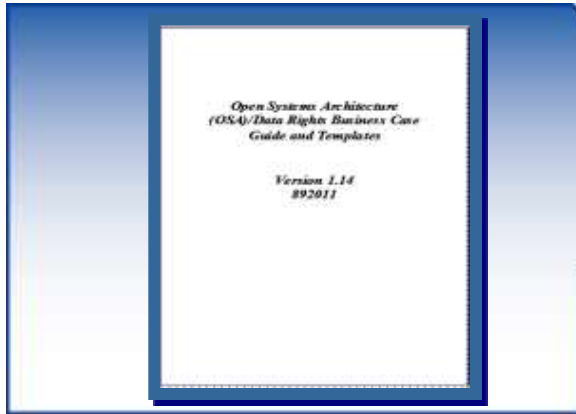
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# Better Buying Power

## Promoting Real and Sustained Competition for the Life Cycle



MEMORANDUM FOR

SUBJECT: Better Buying  
Defense Spending

On June 28, I met  
and warfighter by unpin  
supporting our forces at  
highest priority for the  
continuing responsibility  
ahead, but we will not be  
achieve what we cannot  
MORE. This memo

Secretary Gates

...of which the  
\$400 billion of the \$700 billion defense budget that is spent annually on contracts for goods  
(weapons, electronics, fuel, facilities etc., amounting to about \$200 billion) and services (IT  
services, knowledge-based services, facilities upkeep, weapons system maintenance,  
transportation, etc., amounting to about another \$200 billion). We estimate that the efficiencies  
targeted by this Guidance can make a significant contribution to achieving the \$100 billion  
reduction of defense budget dollars from unproductive to more productive purposes that is  
sought by Secretary Gates and Deputy Secretary Lynn over the next five years.

Since June, the senior leadership of the acquisition community – the Component  
Acquisition Executives (CAEs), senior logisticians and systems command leaders, OSD  
officials, and program executive officers (PEOs) and program managers (PMs) – has been  
meeting regularly with me to inform and craft this Guidance. We have analyzed data on the  
Department's purchases, expenditures, and outcomes and examined various options for changing  
our practices. We have sought to base the specific actions I am directing today on the best data  
the Department has available to it. In some cases, however, this data is very limited. In these  
cases, the Guidance makes provision for future adjustments as experience and data accumulate  
so that unintended consequences can be detected and mitigated. We have conducted some  
preliminary estimates of the dollar savings anticipated from each action based on reasonable and  
gradual, but steady and determined, progress against a clear goal and confirmed that they can  
indeed be substantial.

Changing our business practices will require the continued close involvement of others.  
We have sought out the best ideas and initiatives from industry, many of which have been  
adopted in this Guidance. We have also sought the input of outside experts with decades of  
experience in defense acquisition.

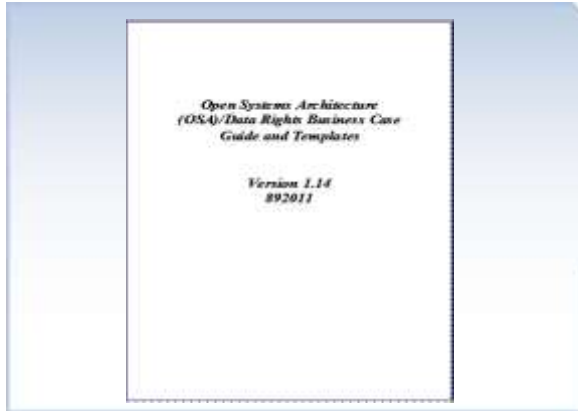
**Require open systems architectures**  
**Set rules for acquisition of technical data rights.**  
**Business case analysis & engineering trade analysis for:**  
**open systems architectures and data rights**



<https://acc.dau.mil/bbpgovonly>

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## Strategic use of IP Rights

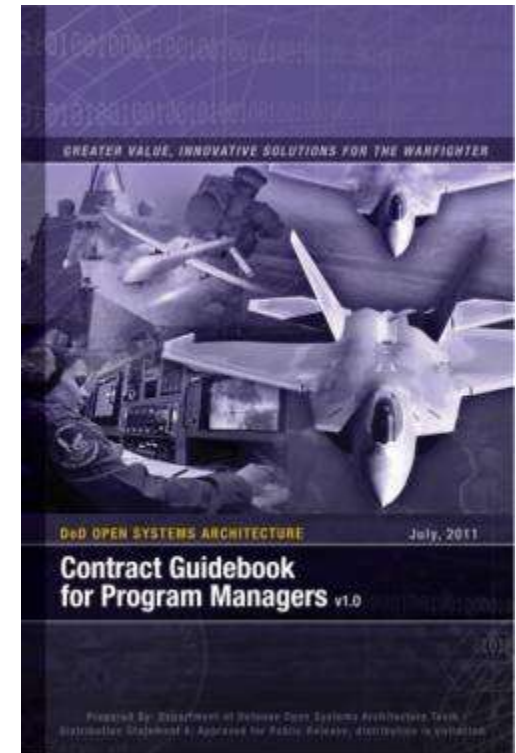


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# The *DoD OSA Contract Guidebook for PMs* can help you

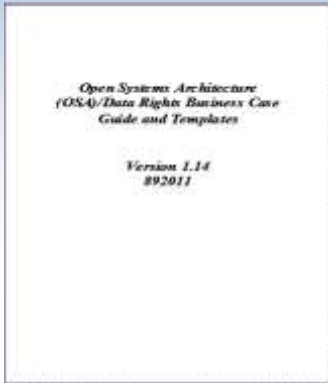
- Leverage a Consistent message to Industry
- Reduce your Risk in contracting:
  - Statement of Work
  - Deliverables
  - Instructions to Offerors and Grading Criteria
- Understand what to look for to get OSA Products
- Leverage Data Rights for the life cycle
- Capture OSA Best Practices for your program
  - Early and Often Design Disclosure
  - Breaking vendor lock
  - Peer reviews for technology evaluation
  - Minimize duplication/Maximize Enterprise value



<https://acc.dau.mil/osaguidebook>

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4





# Forge.mil Marketplace Opportunity

## 1. Free Flow of Information:

- Allows programs and businesses to communicate and share info on DoD systems



## 2. Intellectual Property:

- Identifies government rights to data



## 4. Increasing Competition:

- Drives cost savings and quality

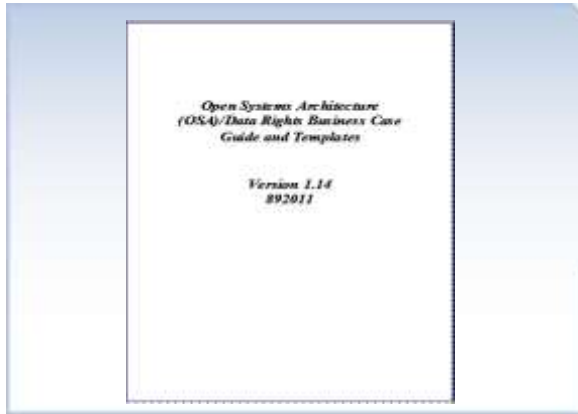


## 3. Trust Between Participants:

- Enforces both ethical and legal standards

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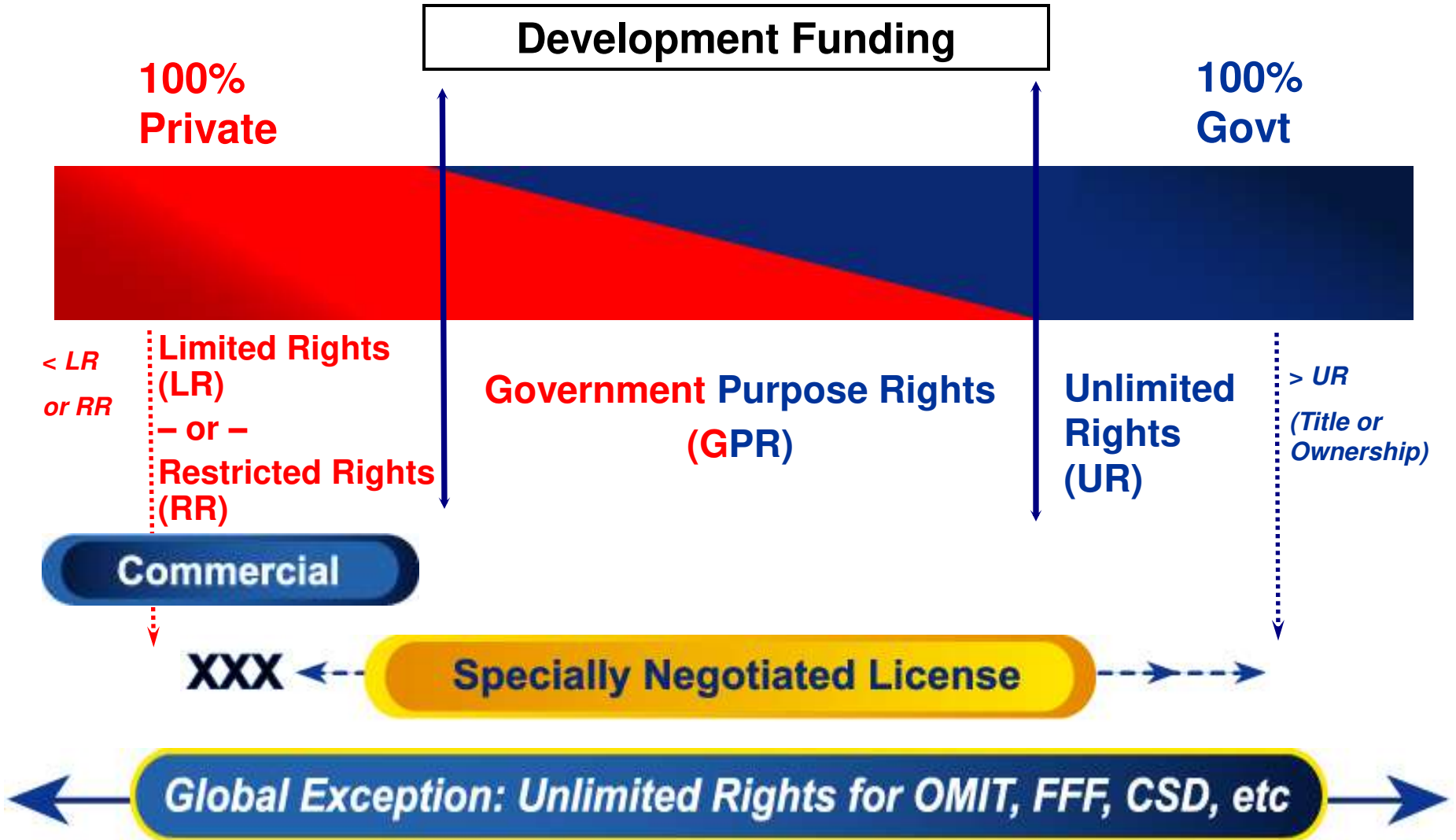
## Strategic use of IP Rights



4



# Data for competition does not have to cost more money



*Who's IP?*

*Unlimited?  
GPR?  
Restricted?  
Proprietary?*

*With whom can it  
be shared?*

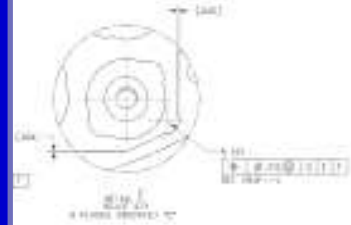
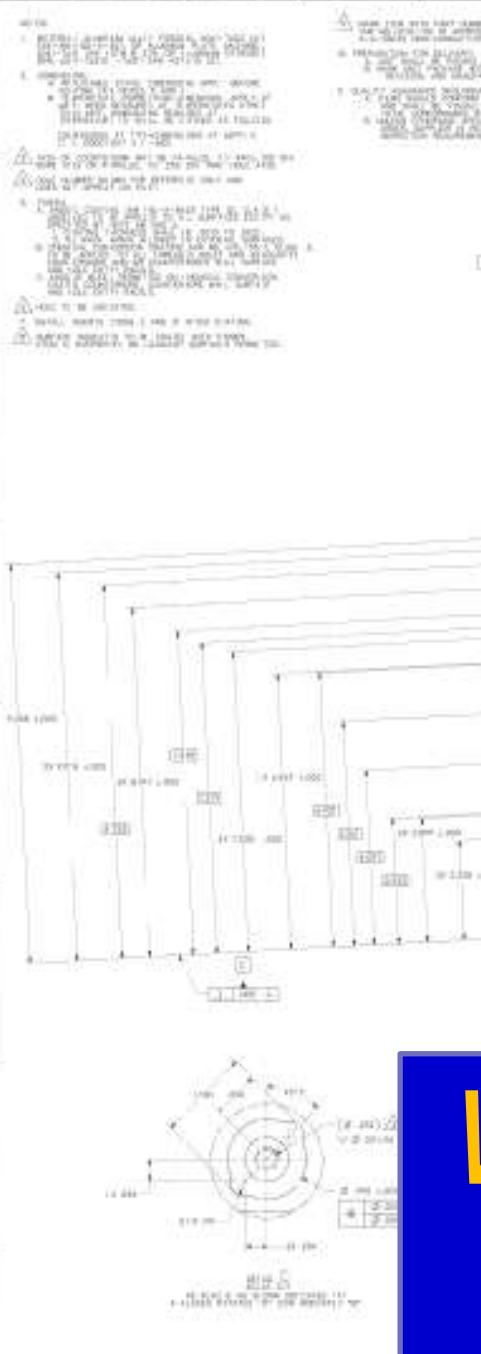
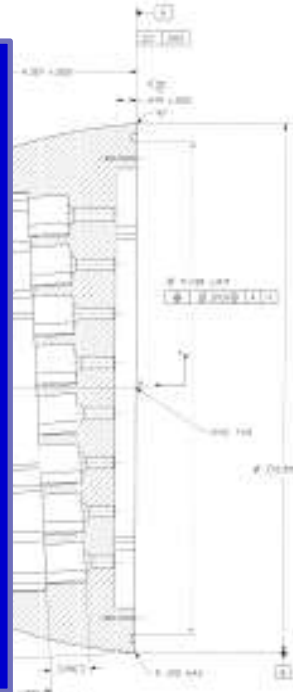


TABLE 1	
Station	Depth
100	0.0
101	0.1
102	0.2
103	0.3
104	0.4
105	0.5
106	0.6
107	0.7
108	0.8
109	0.9
110	1.0
111	1.1
112	1.2
113	1.3
114	1.4
115	1.5
116	1.6
117	1.7
118	1.8
119	1.9
120	2.0
121	2.1
122	2.2
123	2.3
124	2.4
125	2.5
126	2.6
127	2.7
128	2.8
129	2.9
130	3.0
131	3.1
132	3.2
133	3.3
134	3.4
135	3.5
136	3.6
137	3.7
138	3.8
139	3.9
140	4.0
141	4.1
142	4.2
143	4.3
144	4.4
145	4.5
146	4.6
147	4.7
148	4.8
149	4.9
150	5.0



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DEPARTMENT OF THE ARMY  
ENGINEERING CENTER  
FORT BELLEVILLE, ILL. 62205-1000  
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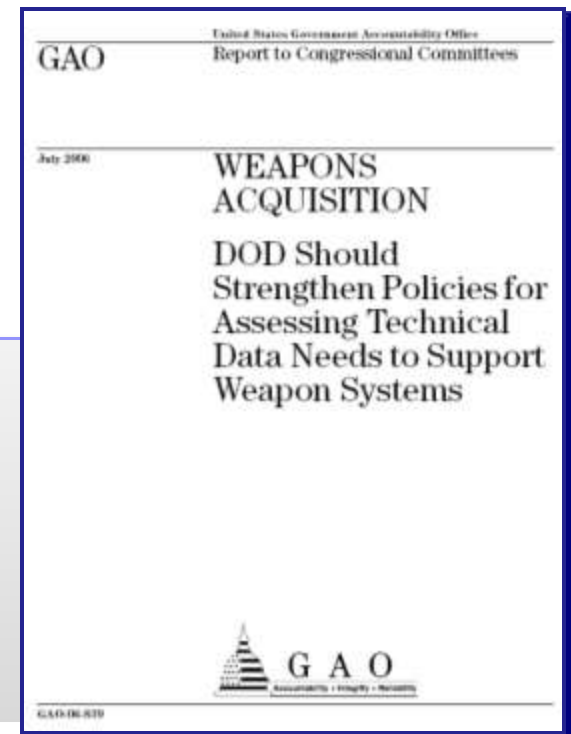
# Why are OSA and Data Rights Important?

- **What you decide may last the whole life cycle:**
  - Maintain potential for competition
  - Flexibility in logistical support
- **Will enable you to:**
  - Take advantage of emerging technologies
  - Quickly introduce new capabilities to war fighters
  - Reduce costs over the life cycle of the Program

## GAO findings:

...Services encountered limitations in sustainment plans for some fielded weapon systems...lack of data rights.

...60% of 47 non-competitive DoD contracts could not be competed...lack of access to data





# Approaches to Breaking Vendor Lock



# Case Study: ONR SEWIP Program

- Surface Electronic Warfare Improvement Program (SEWIP) was prototype by Office of Naval Research (ONR)
- ONR asserted Government Purpose Rights (GPR) on most of the hardware and software
- In the production competition for SEWIP, the Navy provided the actual MFEW GPR data as GFI with the RFP
- Data rights options were included as part of the Block 2
- The RFP required priced option for data and data rights and included evaluation criteria on that option in the RFP
- This resulted in all offerors addressing data rights
- Produced a contract award with IRAD offered as GPR
- The Government got a better price and better performance



## Message to Industry

- The Navy is moving out on OSA, getting a handle on our Data Rights and aggressively pursuing competition to get a better deal
  - More opportunities to win new work by competing
    - Platform, System, Component
  - You current work will be competed
    - Breaking Vendor Lock and getting a better deal is our responsibility





# Leadership Challenge

**Can a qualified third party – Big or Small . . .**

- add,
- modify,
- replace,
- remove, or
- provide support

**. . . based on open standards and published interfaces.**



# Backup



# Case Study: PEO Subs Acoustic Rapid COTS Insertion Program



- In 1995, the U.S. Navy faced a serious crisis...
- The Program Executive Office for Subs adopted an OA approach for sonar which resulted in:
  - Modularized the sonar system;
  - Disclosed designs of the architecture;
  - Published interfaces, and;
  - Increased competition.
- ARCI generated significant large cost savings:
  - A reduction in Development and Production costs by a factor of six;
  - A reduction in Operating and Support costs by a factor of eight.
- ARCI realized over \$25 million in cost avoidance for logistics support, including:
  - Over \$1 million in technical manuals;
  - Over \$2 million in direct vendor delivery;
  - Over \$19 million in interactive, multimedia instruction;
  - Over \$3 million in outfitting spares reduction.

# Case Study: Office of the Secretary for Defense, Unmanned Aircraft Systems Control Segment Working Group

- The UCS-WG changed DoD's traditional approach
- The UCS WG funded a limited number of development pilots to demonstrate the UCS architecture.
- The set of Initial Work Packages (IWP) demonstrated how the U.S. Air Force Weather service capability could be integrated into other Service's GCS.



The service was developed by the USAF it was successfully integrated into Navy and Army GCS'. The demonstration resulted in:

- 75% reduction in development and integration costs;
- Integration time of one - three weeks;
- Reduction of nearly \$4M in redundant GCS-specific weather services.



# Competition Lowers Costs and Increases Performance

- The Government must set the stage for a competitive acquisition
  - Periodic - even with good performance
  - Performance Driven - when performance is below exceptional
  - Break Vendor Lock when needed
- Business Strategy that mirrors our technology architecture
  - Platform Integrator, Subsystem Integrator, Component Provider
- Competition is real when the Incumbent can lose
  - The Government must level the competitive playing field
  - Compete regularly and fairly
- Limited IP (proprietary) is allowed in an Open System Architecture
  - Published module interfaces, loose coupling and high cohesion
- Message to Industry
  - There are going to be more opportunities for market penetration
  - We will compete regularly – nothing personal, it's just business

# History of the *Contract Guidebook*

- Version 1.0 - 05 July 2006
- Proven language over the Enterprise
- Billions of dollars in contract awards
- Incorporated into “Better Buying Power”
  - All services provided input
  - Authored and owned by Navy
- Compendium of best practices –  
We need your ideas
- DoD-level guidance
  - <https://acc.dau.mil/osaguidebook>
  - DAG appendix – coming soon



# You can use our Data Rights to get a better deal

- Unlimited Rights (UR)
- Government Purpose Rights (GPR)
- Limited Rights (LR)
- Restricted Rights (RR)
- Negotiated License Rights
- SBIR Data Rights
- Commercial TD License Rights
- Commercial CS Licenses

