Where Our National Security Begins...
NRO
Industry Advisory Working Group

Working Session
January 29, 2019

Happy New Year!
Agenda

- Welcome & Introductions
- “Snapshots”
- “S2P Corner” & “C2S Corner”
- Action Team discussions
- Government Perspective
- Open Dialog
- No-Host Social
“Snapshots”

Ronda Schrenk, USGIF VP Operations
“C2S Corner”

Latest & Greatest…
Topics & Issues Discussion
“S2P Corner”

Latest & Greatest...

Topics & Issues Discussion

Explore on CWAN/JWICS @ https://jportal.S2P.proj.nro.ic.gov
NRO IAWG
Action Teams & Topics

- Recap of Government Engagements
- Action Team Planning & Way Ahead
NRO IAWG Government Engagements

- DD/GED & D/EDAP on 12/10/18
- D/SG, D/GG, D/ISPO, D/EDAP, DD/EDAP, Chief Architect on 1/8/19

Topics
- Engagement ideas (Buck)
- Attracting Talent (Waynik, Moran, Sarkar)
- Software Acquisition (Sarkar, Buck)
- Speed to Capability (Moran, Lawler, Chioda)
- FGA Adoption: OCI considerations (Greene, Wambold)
- Requirements Over- and Under-Ask (Buck)
Topic 1: Ideas for Improving Government – Industry Engagement

- Consider a “Top 10 Issues with Industry” from NRO PMs, COs, and Leaders
  - Initial data collection via Tier action across Directorates then consolidate and publish to IAWG
  - NRO Leadership-IAWG Steering Committee dialog to categorize and communicate
  - Industry feedback, education/awareness and corrective action (as required) for NRO PM conference

- Consider replicating NGA’s Industry Outreach & Engagement Process
  - Aligns industry capabilities to agency needs...help industry find the “right person”
  - Normalize industry/vendor engagement (minimize random visits aka “whack a mole”)
  - Improve transparency and value of engagements via feedback and followup
  - Mechanism to spur market research and extend opportunities to Mission Partners

- Consider “Reverse Industry Day” venues
  - Industry leaders provide perspective on topical issues (COTS vs GOTS, what drives our rates, etc)
  - Collect government questions from PMs, COs, Leaders in advance, address in panel format
  - Identify disconnects or areas of misunderstanding for further dialog

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**Topic 1 Dialog summary:**
- These didn’t seem to pique interest overall except with D/EDAP
- RID could be way to provide requested FGA architecture feedback
- IAWG needs to be engaged at SPO Director level
Topic 2: Developmental OCI
Alternatives to Promote Framework & Services Adoption

- Specify OCI concerns and narrowly limit restrictions on each procurement (Avoid)
  - Government can restrict scope of the OCI on acquisition by acquisition basis
  - Ex. Government concern about a particular framework interface that impacts a limited number of apps can restrict OCI to a particular app or set of apps
  - Challenge: complicates business forecasting…not predictable…negative industry impact

- Specify solutions in the RFP (Eliminate)
  - RFP requirements specify all or portions of an industry COTS, open source, GOTS, or other government controlled solution

- Narrow the Scope of Service/Application procurement (Neutralize)
  - Narrow scope of a services acquisition neutralizes impact of a Framework prime bidding
  - e.g. a cloud removal app vs the entire Geospatial Processing Applications suite

- Allow Developmental OCI mitigation plans (Mitigate)
  - Allow bidder to propose an approach to mitigate specific Government-identified OCI concerns

- Remove OCI restriction after a technical/contract milestone (Time/Neutralize)
  - Government OCI can be limited to the time the developer has control
  - Government control of the solution (Government acceptance, delivery into ops, Government design control/CDR, documentation/source code) can serve as the decision point
Government resonated with observation they are trying to get accountability of a vertically integrated system with the efficiency of horizontal

- Government: Frameworks as “enduring, long-lived entities” drives OCI posture
- Perception that long-term role provides advantage over time
- While noble in intent, this concept “caps” business opportunity
- Industry input: use recommended neutralization, mitigation, and elimination techniques

Government: Can we resolve OCI challenges via architecture segmentation?

- Industry input: probably not. The finer grained OCI is applied the harder it is to manage

Observation: more government interest at Directorate level than SPO level

- General sense this is a follow on conversation with GED Contracts

Lexicon issue: “Platform” vs “Framework” vs “Applications” vs “Services”

- Suggestion: implement a Terms of Reference in FGA 2025 architecture documentation
**INDUSTRY OBSERVATIONS**

- FGA architecture well documented but FGA Integration Model is unclear
- “Create, Buy, Adopt” vs. “Adopt, Buy, Create”
  - Tendency to develop from scratch w FOSS rather than leveraging COTS capability.
  - Contracts structure and RFP criteria discourage software bill of materials in bids.
- Emphasis seems to be on head-count/FTE-based procurement
  - Industry recommendation for outcome-based, completion-deliverable based

**INDUSTRY-GOVERNMENT DIALOG SUMMARY**

- Government: FGA “default” is government as integrator
  - Interest in Industry-Government dialog; asked for feedback on the architecture
  - DD/GED concern over government skills and resources: “need SMEs who know mission”
  - Topics include level of segmentation & source of mission expertise
- Challenge: How to do End to End Enterprise integration & test in a DevOps world?
GOVERNMENT “Attract” the Talent by creating market conditions

- Consider a portfolio approach to Contract Types (IDIQ vs Single Award)
  - Balance flexibility and speed of IDIQ TO approach with continuity and base of Single Awards
  - Investigate relationship between size/segmentation and contracting strategy impact on industry base

- Focus on Price/Performance and Cost Realism over Labor & Wrap Rates
  - Recognize that Talent drives fully-burdened and direct labor costs
  - Higher quality, faster delivery is less expensive and more predictable over course of program

- Emphasize Deliverable- or Milestone-Performance Based Contracts vs LOE
  - Provides Government leverage; provides Contractor flexibility to deliver talent
  - Buy “Capabilities” instead of Candidate Resumes
  - Reward risk taking (Innovation is typically risked up in proposals)

- Use established contracts practices to create resilient security pipelines
  - Use “Security CLINs” on established contracts, CRADAs, Marketplace (ala C2S sponsorship)
  - Clearance investigation sponsorship for IR&D projects that will move low-to-high
  - Consider Continuous Evaluation or Interim Security Clearances pending backlog reduction

- Enable “green to blue” opportunity for industry-government career mix
Topic 4: Attracting Talent
Dialog Summary

- Resonance on portfolio approach to Contract Types (IDIQ vs Single Award)
  - Followup question was “what is that right mix?” and “can industry help ID it?”
  - Discussion on “tailoring” RFPs but not a lot of answers on how

- Resonance on Deliverable- or Milestone-Performance Based Contracts vs LOE

- Some resonance with Price/Performance/Cost Realism vs Labor & Wrap Rates
  - Seemed they were having to think about the implications, hough

- Strong interest in “Dev Ops Starter Kit” to address security sponsorship issue

- Government question: “how do companies feel about teaming for talent?”

- IAWG: appears the current approach is to access talent via industry base and government/FFRDC/SETA re-skilling/training
<table>
<thead>
<tr>
<th>Requirements</th>
<th>Acquisition/RFP</th>
<th>Contracting</th>
<th>Development &amp; Tech Transfer</th>
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</thead>
<tbody>
<tr>
<td><strong>“Requirements Lock”</strong></td>
<td><strong>“Solicitation Bloat”</strong></td>
<td><strong>No Contracting Metrics</strong></td>
<td><strong>Waterfall Culture</strong></td>
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<td>Observation</td>
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<td>• Inhibits ability for programs to weave in new capabilities</td>
<td>• Drives away qualified performers, creates extra work – on both sides – without necessarily providing benefit</td>
<td>• Lack of specific, shared objectives for improving contract(ing) performance. Lack of concrete actions means status quo wins</td>
<td>• Inconsistent capability delivery chain and clunky transition to operations</td>
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<td>Contributing Factor</td>
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<td>• SOWs that “bake out” innovation or don't articulate means to innovate (e.g., need to use study CLIN)</td>
<td>• Path of least resistance and lowest risk: “Include everything”</td>
<td>• Dearth of metrics for assessing quality of docs, RFPs, and contracting timelines</td>
<td>• Inertia within current hybrid infrastructure and lack of end user involvement</td>
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<td>• Dynamic Reqs Management</td>
<td>• Right-size compliance documentation to effort size</td>
<td>• Measure against STC metrics based on industry standards and tailored to program profiles. [See template]</td>
<td>• Create nexus where technologist, operator/analyst, MSI, and acquirer can ID and advance solutions immediately, then document “requirements”</td>
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<td>• Involve end users up front to define the “what” not the “how”</td>
<td>• Involve security teams in the solicitation creation</td>
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<td>• Expand use of IDIQs</td>
<td>• More two-way exchanges</td>
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**Goal:** increase throughput, decrease acquisition variances
This whole topic is “top of mind” at Directorate and SPO level. CA interest in underlying reports and info worked on by the STC team

General resonance with “right sizing” compliance and matching CBL size to procurement size

Resonated with concept of measuring contracting performance (process, timeline, document quality) but unsure of the “right” metrics

GED D/Contracts is skeptical industry would align around contracting practices/ideas

IAWG Observation: GED doesn’t realize how important their S2P is and how far ahead it is of most agencies

IAWG Discussion point: is “Government as Integrator” a STC topic or part of separate “FGA Integration Models” Action team?
Topic 6: Software Acquisition Issues
COTS/GOTS/FOSS Software Make-Buy Factors

COTS/GOTS Open Source Software Business Models

Business Model Differences
Terms of Reference
Drivers: Make-Buy-Integrate Decisions

GOTS?
Integrate/Hybrid?
COTS?

BUSINESS MODEL FACTORS
• Life cycle costs and cost recovery
• Data & Intellectual property rights
• Maintenance and licensing, royalties
• Patent protections and indemnification
• Licensing (incl OSS)
• Security certification & patching
• Govt vs Industry Funding models

ARCHITECTURAL FACTORS
• Level of componentization vs Functional Requirements
• Degree of API publication & openness
• 80% fit vs 100% fit vs not invented
• Open I/Fs vs Open Source code
• Development vs Integration

OPERATING MODEL FACTORS
• ABC (Adopt, Buy, Create) vs CBA?
• “Speed to Need: Day 1 capability”
• Different pots of money: Dev vs O&M?
• Waterfall vs Agile vs DevOps

Challenge: Must avoid recreating commercially available capability
“The contractor shall not use **proprietary, vendor-unique or closed interfaces, code modules, hardware, firmware, or software**. Examples of acceptable software licenses include, but are not limited to:

- Government Off-The Shelf (GOTS),
- Government Open Source Software (GOSS)
- Free and Open Source Software (FOSS),
- Commercial Off-The-Shelf (COTS) software,
- web-based RESTful services, and
- libraries (e.g., Apache) licenses

**eliminating** any vendor dependencies and proprietary software license restrictions and **reduction** in Total Cost of Ownership (TCO) of the system. “

**Discussion Points: Intent to reduce TCO and promote Open Systems**

- **Overall**: RFP language getting more consistent and effective for maximizing value
- **Observation**: Gaps in COTS licensing, IP/Rights, Source Code requirements language
- **Govt Demand for Open Interfaces** = good… **Caution**: can’t bias against proprietary solutions
- **Complete coverage of license types** = good
- “Reduction” should be “Reducing”
“Create, Buy, Adopt” vs “Adopt, Buy, Create” generated question if there is a disconnect between leadership intent and working level execution (yes)

Strong resonance with using COTS for “Day 0 Capability” and extending via GOTS/OSS on top via API’s and SDKs

Resonance with proprietary INTERFACES as root cause of Vendor Lock.
  – Concurrence that RFPs should focus on open interfaces/API
  – Concurrence that proprietary solutions/code are not the issue.

Terms of Reference issue didn’t really resonate. However, confusion exists between industry vs government definition of “Platform” (same for “Applications”, “Services”, and “Frameworks”)

IAWG Observation: RFP language emphasizes GOTS development.
  – COTS licensing terms and conditions are typically by reference. All are highly variable.
Chief Architect request for Agile & DevOps as first QUINT SPO topic

- GED scaling Agile and DevOps across Program Offices
  - Challenge: how to implement DevOps with cross-program dependencies
  - Challenge: Release prioritization across projects and programs

- Training gaps, standardization, and program-specific implementations
  - Who is training the government, FFRDC, and SETA?
  - Engineering Practice Managers, Thread leads, and Product Owner roles

- Contracting strategies, structures, and language
  - Differences of opinion on CP/AF/IF (deliverable) vs FFPLOE (story point)
  - Traditional CDRL-based approaches must evolve to accommodate DevOps

- E2E System Closure in an Agile & DevOps world
  - Impact of Continuous Delivery & Integration models on TTO
  - “Iron Bar of Enterprise Test”: Mission Partner + NRO Ground Segments + Space Segment
Actions

- Co-Chairs: Establish recurring engagement at GED “QUINT SPO” meeting
- Talent: Provide GED leadership with “DevOps Starter Kit” info for clearance sponsorship and IR&D instances on C2S/S2P
- FGA: Identify options for providing industry-wide feedback on FGA architecture in format more useful and open than RFIs
  - Get membership access to FGA 2025 architecture (government stated it was ‘released’)
  - Consider Action team and/or RID to engage
- STC: Engage GED Contracts regarding Contracting Performance” aspects and how industry would propose assessing them. What metrics?
- Potential Action Teams:
  - FGA Integration Model & Cross-Segment/Cross-Program DevOps
  - STC or new team address Waterfall TTO to DevOps Continuous Delivery & Integration
- Agile & DevOps Action Team Part 2: Form & Kickoff
Government Perspective
Open Dialog

Additional Topics for Consideration
Actions & Next Steps
No-Host Social
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BACKUP
### STC Metrics – Template

**Presumed:** STC is inversely proportional to program size

*There might be other relevant categories besides size (e.g., environment – legacy, modern, hybrid).*

**Time-Based Metrics**

Plot each program’s Actual performance relative to its defined Threshold / Objective

**SPEED TO CAPABILITY**

<table>
<thead>
<tr>
<th>Capability</th>
<th>Requirement-to-Award</th>
<th>Award-to-First-Capability</th>
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<td>Size</td>
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- **1st graphic represents Requirement-to-Award (aka government)**
- **2nd represents Award-to-First-Capability (aka industry)**

**IAWG might offer an industry benchmark for the class of capability category**

*Track actual performance against pre-determined threshold and objective specific to that program*
NGA’s “Top 20” Issues w Industry (1 of 3)

PERFORMANCE
- Overpromising capability and capacity, resulting in protracted vacancies and/or unnecessary turnover/churn in personnel (enterprise contracts)
- Recycling subpar talent and/or passing known problem employees from vendor to vendor, especially on FTE contracts
- Assigning untrained FTE staff who require months of training by NGA before they can perform the task they were expected to do on day one
- Perception that some vendors search for reasons to request extensions to delivery dates
- Invoicing NGA before a deliverable is accepted

BUSINESS PROCESSES
- Overbearing Primes
- Not allowing Subs to innovate
- Exclusive Teaming – Industry practice that locks small businesses into teaming arrangements with single prime. Stifles competition by binding teams together competition after competition, limits government access to small business expertise except through specific primes.
- Requesting green IC badges to support contracts, but instead using them to conduct business development with NGA and, as a result, often restricting access to limited overhead badges from subs who need them
NGA’s “Top 20” Issues w Industry (2 of 3)

RFI/RFP PROCESS
- Not sending helpful feedback to RFIs
- RFI responses provide marketing pitches regarding overall corporate capabilities rather than thoughtful responses to the questions posed
- Price or cost proposals are lacking in content and detail (e.g., basis of estimates not congruent with technical approach or other volumes of the proposal)
- Incomplete proposals
- Increasing number of protests strains limited government resources

MARKETING
- Guerilla marketing – tendency to haphazardly reach out to anyone within NGA, at any time, at various technical and leadership levels – creates confusion and mixed communication
- Direct marketing to NGA seniors; responding to requests by submitting proposals or white papers directly to Seniors rather than following established processes
- Sending BD people to Tech Days
- Rebranding products without prior notification to NGA, leading NGA to learn of the change at the time of contract renewals.
NGA’s “Top 20” Issues w Industry (3 of 3)

COMMUNICATION/FEEDBACK
• Inadequate communication during contract administration (e.g., taking action on direction received from the program offices or customers that is outside the authority of the COR or Task Manager)
• Latency in reviewing and signing contractual documentation (e.g., ECPs, bi-lateral modifications, etc.)
• Delays in providing required notices under Limitation of Funds provisions (e.g., alerting the CO when 75% of available funds have been expended)