NRO
Industry Advisory Working Group

Working Session
29 October 2019
Agenda

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

• Join an Existing Team
  • Agile & DevSecOps (with sub teams)
  • Speed to Capability
  • Hybrid Cloud
  • FGA Adoption
  • Attracting Talent

• New topic: Optimizing use of Cloud Development resources
• New topic: GOTS/GOSS Management Model for GED Software
• Potential new topic: Optimizing development using cloud infrastructure
• USAF Agile RFI: IAWG cross-industry response
  - Need: Volunteer contributors
  - Need: Topic(s) selection
“Snapshots”

Previous Events
- GEOINTegration Summit: 27-28 September
- GED Agile Industry Day: 27 September (TS/SCI required)
- GED Agile Brown Bag: 29 October (TS/SCI required)

Upcoming Events
- Attracting Talent team joint session with YPWG: 11/7
- Amazon reinvent: 2-6 December

Combining Nov-Dec NRO IAWG meetings: Joint NRO-NGA on 12/3

Discussing shift to 12/10
Joint NRO-NGA IAWG Topics
December 3, 2019

1. Joint Action team on accelerating Transition to Ops
2. Agile Terms of Reference reuse for NGA
3. Hybrid Cloud decision framework
4. Improving Agile acquisition: Right-sizing RFPs & Pre-award comms
5. Attracting talent
Q: What activities are ongoing to change culture to progress away from risk avoidance posture ACROSS the NRO (i.e. outside of GED)? Industry discussion has involved:

- SED: requirements definition and flow down process on front end
- MOD: TTO process on the back end
- ALL: RFC/ERB process as a serial gating function to approval vs. a Baseline Config Control process documenting “as built”.
- Contracts: tailoring for Agile/DevOps, market research (pre-award) communications, CDRL alignment to Agile Sprints/Releases.
- FM: CFSR, EVM, and financial tracking in Agile programs vs traditional IBR/Waterfall programs

A: No specific response…perhaps our “discussion” covered it?
Q: What metrics are you using to measure success/velocity (noting that velocity by itself can be an anti-pattern). What metrics do you WANT to use?

A: “We believe the truest measure of success for our programs is to assess the progress actually made on developed software against that which the parties actually planned prior to the period being measured.”
Q: What contract types/structures do you anticipate for future acquisitions involving Agile & DevSecOps (both Developer & SETA)? Industry discussion involved FFP vs CP vs T&M… discussion around deliverable efforts such as Jarvis vs LOE efforts such as NGA Agile Web Presence (Story Points) as well as any differences between SETA and Non-SETA/Developer efforts.

A: “GED anticipates utilizing a variety of contract types and structures in order to be supportive of future Agile approaches. As each acquisition is different and unique, the type of contract and/or contract structure will be determined by what is being acquired and how. Even with acquisitions focused heavily on Agile & DevSecOps each potential acquisition will be assessed for the appropriate contract type and structure based on the nature of the activity. That being said, the closer our acquisitions move toward MSA values, the more likely they will be of a Cost Reimbursable (Completion) nature with AF and Milestone incentives. Currently GED Agile pilots are utilizing T&M and FFP contract constructs.”
GED Agile Information Exchange

Selected Unclassified Excerpts
(U) GED’s Approach to Agile-lution

(U) Agile Goal: Improve the NRO’s ability to accept, build, test, and deploy ground capabilities more quickly to reflect and meet user needs.

- (U) Approach the problem in an Agile manner.
  - (U) Evolution occurs over time – can’t all be defined up front, but through definition and execution.

- (U) GED is ~1 year into this transition.
  - (U) Programs have been moving out and implementing Agile Management Practices.
  - (U) All have made progress and pushed through uncertainty; much more to do.
  - (U) Targeting Full Performance by end of CY2020.

- (U) EOFO is starting with an Agile Coach and all planning done with SAFe practices.
(U) Functional Equivalency

<table>
<thead>
<tr>
<th>Process</th>
<th>GED Waterfall Events</th>
<th>Agile Ceremonies</th>
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</thead>
<tbody>
<tr>
<td>Requirements and Design</td>
<td>SRR, PDR, CDR</td>
<td>Solution and Program Increment Planning Events</td>
</tr>
<tr>
<td>Configuration Management</td>
<td>GED Level Request for Change (RFC)</td>
<td>Pre-Planning Phase, Solution and Program Increment Planning Events, Deployment Checklists (after Initial Installation RFCs)</td>
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<tr>
<td>Test and Evaluation (T&amp;E)</td>
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<td>Sprint, Program and Solution Level demonstrations</td>
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(U) There is not a one-to-one mapping between Agile ceremonies and method and Waterfall events. The risk mitigation that drives the traditional Waterfall Readiness Events is still accomplished in Agile, however; the mitigation is done iteratively instead of in “big bang” events.
Agile Integration with Traditional Milestones

Enterprise

<table>
<thead>
<tr>
<th>System</th>
<th>Architecture</th>
<th>Launch Readiness</th>
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<tbody>
<tr>
<td><strong>Launch</strong></td>
<td><strong>Collection / Space Relay (Space &amp; Ground Elements)</strong></td>
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<tr>
<td><strong>Acquisition Segments</strong></td>
<td><strong>Solution Planning/Demo Increment Planning/Demo</strong></td>
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<td><strong>Shared Service Acquisition (TBD 002)</strong></td>
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Acquisition Readiness

Launch Base

Operational Readiness

Mission
(U) Requirements Allocation Approach

- **Allocated Baseline Requirements**
  - e.g. Send and Support data processing
  - e.g. Process data to generate products
  - e.g. Deliver Products to NGA

- **Solution Epics**
  - Can be multiple solution increments in duration
  - Includes success criteria

- **Feature-Level Epics**
  - Sized to fit within a single increment, assigned to one project

- **Stories**
  - Decomposition of Features
  - Analogous to PDS
  - Should fit within a single sprint

System Qualities (Non-Functional Requirements)

- Security
- NIST
- Other Standards

Graphic is Unclassified
(U) Requirements Trace

* (U) Solution Epics are not decomposed from Function Level requirements. The Solution Epics will be mapped to the Function Level requirements they cover to provided a trace to the allocated baseline.
(U) Status of Agile Guidance

<table>
<thead>
<tr>
<th>Document Name</th>
<th>Status</th>
<th>Link</th>
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<td>GED SEP</td>
<td>Signed By D/GED 8/20/19</td>
<td><a href="https://confluence.s2p.proj.nro.ic.gov/display/GAT/GED+SEP">https://confluence.s2p.proj.nro.ic.gov/display/GAT/GED+SEP</a></td>
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<tr>
<td>GED TEMP</td>
<td>Expected October 2019</td>
<td>In GED Review</td>
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<tr>
<td>GED Agile Lexicon</td>
<td>Completed</td>
<td><a href="https://confluence.s2p.proj.nro.ic.gov/display/GAT/Agile+Lexicon">https://confluence.s2p.proj.nro.ic.gov/display/GAT/Agile+Lexicon</a></td>
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<tr>
<td>System Engineering SOPS and Templates</td>
<td>Planned starting Q1FY20</td>
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Table is Unclassified
(U) Governance Updates

- (U) Throughout the evolution to SAFe, the governance will be updated more frequently.
- (U) Current updates to the SEP and TEMP include both agile and waterfall/spiral process considerations.
  - (U) For the SEP, since it is prescribing SAFe management of development efforts, whether executed as agile or waterfall/spiral, there is a blended approach.
  - (U) For the TEMP, IVV&T efforts take diverging paths; a new section was added to the TEMP to describe the SAFe Test and evaluation (T&E) efforts.

(U) As the evolution progresses, the SEP will be updated to remove some of the waterfall/spiral process considerations and become more Agile. Additional concepts, such as DevSecOps will be added as the appropriate agreements can be reach across the NRO.
(U) Roles and Responsibilities

<table>
<thead>
<tr>
<th>Agile Term</th>
<th>Enterprise Architect</th>
<th>Solution Architect/Engineer</th>
<th>Business Owner</th>
<th>Solution Manager</th>
<th>Solution Train Engineer</th>
<th>Product Manager</th>
<th>Release Train Engineer</th>
<th>System Architect/Engineer</th>
<th>Product Owner</th>
<th>Scrum Master</th>
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<tr>
<td>GED Chief Architect</td>
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<td>GED Developers</td>
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* CA works with SED OCA (not shown).
** denotes additional CA responsibility for early/emerging efforts, pre-SRR

Blue denotes government role
Green denotes development contractor role
(U) Thread Leads/Solution Manager

• (U) As the Solution Manager, the Thread Lead:
  • Formulates the vision for the Thread
  • Develops the Thread (Solution) Roadmap
  • Test Director
  • Defines Solution Epics
  • Organizes Thread readiness events (demos)
  • Leads Thread Planning Events
  • Prioritizes work for the Thread

(U) The Thread Lead role is integral to keeping cross-SPO planning, development, and testing efforts aligned.
(U) Release Management Team

- (U) The Release Management Team is the Scrum of Scrum responsible for ensuring that:
  - The Feature Epics in the Program Backlog are prioritized
  - The Roadmap is created, and cadence of the Agile Release Train is followed.
  - The Release Train Engineer (RTE) facilitates meetings to identify cross team synergies, conflicts, and bottlenecks.

(U) The Release Management Team aligns development and test efforts that span multiple teams and contracts.
(U) Demonstration and Test

- (U) GED is shifting from “Big Bang” End-to-End testing to incrementally demonstrating capabilities.

- (U) Integration for demonstration exercises the interfaces and identifies issues early in the development lifecycle.
  - (U) Integration across program and development team is facilitated by the Release Management Team and Thread Leads.

- (U) Waterfall development efforts will be integrated when early release is available.

- (U) Demonstrations occur at the Solution, Program and Sprint level.
(U) Program Increment Demos

Pre-Planning Increment for Release Train X

Release 1
Release 2

Pre-Planning Increment for Release Train Y

Release 1
Release 2

Integrate, Test and Demonstrate

Integrate, Test and Demonstrate

Simulators or Early Releases

SRR
PDR
CDR

Waterfall Delivery A

Graphic is Unclassified
(U) Solution Demonstrations
(U) Catapult & Greek Fire Pilot Contracts

- (U) Objective: implement operational SMM Status Presentation displays – includes real-time grid, map, and timeline displays
- (U) User-centric design: user engagement drives feature backlog, design and acceptance
- (U) Test-Driven Development: development does not begin on a feature until its tests are written
- (U) Frequent smaller deliveries to operations – no big bang
- (U) Partnered with EDAP to add Pivotal Cloud Foundry (PCF) to the suite of S2P service offerings
- (U) Development primarily performed unclassified at Pivotal Labs DC using DI2E and S2P hosting solutions
The Pivotal team structure is a “balanced team” using paired personnel from Extreme Programming (XP): two people performing each role. The team is sized similarly to Bezos’ “two-pizza team.”
(U) IDP Agile Practices

- (U) Objective: deliver a micro-service based interactive SIGINT mission processing thread to the cloud using agile practices
- (U) Prove out thread level agile governance
- (U) Statement of Work is a product vision and list of features - end item is responsive to learning and user feedback
- (U) Use of automated tools (Jira, Confluence, etc.) to gain near real time insight on contract performance
- (U) Collaborative, cross industry partner team where Government maintains architectural control of thread
(U) Pilot Lessons Learned to Date

- (U) Listen to industry and incorporate feedback where appropriate
- (U) Request targeted information with the Request for Proposal
- (U) Streamline CDRL delivery and exploit agile management tools such as Confluence to deliver required content
- (U) Engage end users and stakeholders from the beginning
- (U) SG SPO continuing to learn how agile methodologies fit in with existing systems engineering practices and governance
GED Engagement Way Ahead

- Government recognizes we have MANY topics
- QUINT is a good entry point but some topics belong elsewhere

Recommendations
- Categorize contracts-related vs PM-related venues
- Encourage shoulder-to-shoulder roundtable discussions

Contracts Topics (ACE?)
- Right Sizing RFPs
- Pre-Award Communications
- Outcome-based contracts
- Agile Contract Structures
- CAIV pricing approaches

PM Topics (QUINT SPO)
- Attracting Talent
- Optimizing use of cloud dev resources
- Hybrid Cloud Decision Framework
- GOTS-GOSS Management
- DevSecOps ToR
- Accelerating TTO
“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

- New Topic: Optimizing use of cloud development resources
- Attracting Talent Update: Prep for YPG & QUINT
- Speed to Capability Team Update: Right Sizing RFPs
New Topic:
Optimizing Development Using Cloud Infrastructure

- Government observations: Industry Partners are:
  - Manually configuring development environments by hand on C2S in lieu of preconfigured or auto-deployed alternatives
  - Leaving environments running when they are not being used

- Perception: industry developers trying to do what they’ve always done
  - Developers are trained to develop on custom, stand-alone IDEs
  - Developers not trained on best practices for developing in cloud environments
  - No accountability mechanism for sub-optimal development practices

- Challenge: there appears to be no incentive for optimizing cloud dev use
  - GFE compute resources make it the government’s cost problem
  - Developers prefer their own unique environments so they aren’t complaining

What will it take for Industry to accept accountability and drive optimization?
NRO IAWG Action Team

Attracting & Retaining Talent: Business & Operating Models

Ann Waynik  Pam Arya  Ben Avicelli

Ken Bonner  Tom Davidson  Keith Morgan

Sonny Sarkar  Marc Snyder
The Talent & Employment Environment

- **BABY BOOMERS:**
  - Next 20 years, ~10K People Each Day will Reach age 65

- **MILLENNIALS:**
  - Flooding the Market; Anxious to be on the “Bleeding Edge”
  - Getting Larger Salaries (Equal to SMEs) without a Clearance

- **INDUSTRY (FFRDC, SETA AND Development):**
  - VA Unemployment at ~2.1% Available Talent is Limited – even w/Bonus
  - Willing to Pay for the Cutting-Edge Technology – but Clearance Constraints

- **GOVERNMENT:**
  - Need: SME (Institutional Knowledge) “+” Millennials (Cutting-Edge Technology)
  - Shrinking experience base in Contracting & Program Management

**OVERALL:**
Commercial (AWS, GOOGLE, SPACE-X) is Hiring Away from GOV & GOVCON
Commercial is the “Latest” Leading Edge causing a Resource Shortage for All
Observations: Primary Drivers Given the Environmentals…

1. **Nature of the Work: Is it Cutting Edge, Impactful, Meaningful?**

2. **Contracting & Solicitations: Price vs. Cost**
   - Price/Performance is most effective measure of value delivered
   - Rates are not a viable measure of performance (potential to pay more for less value)
   - Pre-eminence of direct rates and wrap rates over price creates LPTA “conditions”
   - Salary, fringe, incentives (student debt relief), etc directly impacted
   - Rate pressure without considering impact on performance creates talent pressure
   - GED emphasis on Price Realism has potential to normalize this issue

3. **Contracts Portfolio: IDIQ vs Single Award, FFP/CP vs LOE**
   - Contracts mix impacts overhead (IDIQ “hunting license” = carry talent on overhead)
   - FFP/CP deliverable contracts offer more options to retain talent than LOE contracts

4. **Security Clearance Sponsorship: Requires an Onboarding Pipeline**
   - Chicken & Egg: must have a contract to sponsor. Can’t get a contract without.
   - Clearance “pipelines”: fundamental to attracting & retaining talent. 2-year lead time.
   - IC has instances of successful expertise-base or industry-base “pipeline contracts”.
   - Ultimately connected to Contracting approaches due to overhead pool impact.
Observations: SETA vs Development Acquisition

**SETA:**
- Reliant on SME Experience, Years and Knowledge “Networking”
- Costs are Inherently Higher (Level/Years of Experience & Clearances)
- Solicitations Must Achieve “Best Value” (don’t go LPTA on your “brain trust”)
- Idea: Sponsor “Interim” Cross-overs and Clearance to Get Skill Mix
- Idea: Set-aside “Junior and Uncleared Portions” within Solicitation

**Development:**
- Solicitations typically “Technical Significantly More Important than Cost”
- Greater Emphasis on Latest Technology (~ 5 to 10 Years)
- Idea: Provide Weighed Factors in Solicitation for XX% for Uncleared Support
- Idea: Reward Offerors who are Innovative with Use of “Waiting for Clearance”
- Idea: Leverage Cutting Edge COTS to Draw in the Leading Edge Talent

Government –

*Must* Differentiate between SETA & Development
Talent Attraction and Solicitations
GOVERNMENT “Attract” the Talent

- 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)

- Security Waivers, Continuous Evaluation or Interim Security Clearances
  - Provide Additional Security Billets to each Company and Interim Clearances
INDUSTRY: “Retain” the Talent

- **Meet Needs**
  - Sign-on Bonus, Retention Bonuses, Pay off School Loan
  - Quicker Promotions, More Career Flexibility

- **Provide Continuing Training**
  - Agile Processes/MBSE, Renewal of Certificates, Latest Seminars/Conferences
  - Provide “RIDE ALONG” Mentors

- **Provide Corporate and Program IRADs**
  - Accept Risk with Performance-Based Deliverable Contracts
  - Be More Creative with Cost/Schedule/Performance Constraints
  - Look at Functional versus Technical experience (to broaden talent pool)
  - Similar Pay Scales for those with “Functional” Experience

**BOTTOM LINE**

**GOVERNMENT’S ROLE:**  
*Attract the Talent*

**INDUSTRY’S ROLE:**  
*Train & Retain the Talent*
Action Team: Speed to Capability (STC)

Right Sizing RFPs UPDATE

Ben Chicoski (Lead)
Joe Chioda Scott Lawler Pete Epstein
Mike Moran Ron Alford Eric Viglione

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202.746.1124
Right-Sizing RFPs

Observations
- “Solicitation Bloat” deprives government of qualified, innovative performers (mostly SBs), creates extra work – on both sides – without necessarily providing benefit
- Increasing complexity of acquisitions in areas like IT has caused a skills gap in the acquisition workforce; challenge increases with advent of AI / ML

Contributing Factors
- “Include Everything” historically seen as easiest and lowest risk re compliance
- High variance and low predictability of acquisition timing

Movement within DoD
- Dr. Will Roper (Under Secretary for AT&L) at INSA Summit: “Work with users for Acquisitions” and get to “…shorter description of needs”
- USAF Chief Software Officer: “Mandate the use of Agile methodologies, including for the creation of RFPs, by using user stories….RFPs should NOT define precise requirements with pre-defined technologies but focus on establishing mission outcomes and precise metrics to prove success of those end-goals.”
- DAU: Agile / DevSecOps training for acquisition staff
IAWG Ideas for Right-Sizing RFPs

• Avoid complex RFPs with long planning phases which include deliverables and milestones and fixed budgets, and which can stifle ability to learn and adopt new ideas along the way.

• Right-size compliance documentation (especially docs listed as “reference,” which can be misleading, overly onerous, or unnecessary) to match the work being procured.

• Train program officers and contract managers to specialize in IT acquisition (e.g., mimic Digital IT Acquisition Professionals Program).

• Train people from variety of functions (tech, finance, contracting, security) on Lean-Agile practices.

• Minimize CDRLs to extent practical to avoid unnecessary effort and disrupting execution flow
  o Start with minimum (e.g., financial CDRLs required by law) and add more only if deemed mission-essential
  o Match program size and contract type

• Make CDRLs “contractor format” to mitigate anti-patterns tied to delivering classic CDRLs

Benefits include:

• Access to more qualified performers
• Clearer and shorter acquisition process
• Less disruption to flow during execution
Contractor team was provided a top-level SOW describing the objectives to be achieved
- Didn’t drive an extensive proposal response
- Discussion with customer helped explain the context of the SOW

Customer explained budget constraints (providing price target ≠ exposing the budget)
- Allowed team to focus on achieving the desired scope at expected cost
- Team was able to bid capacity within an Agile methodology, reflecting desire to allow innovation and modifications as necessary

Proposal outlined the agile interaction business rhythm with the customer
- Detailed frequent touch points were identified allowing the customer to re-prioritize work between each 3-month increment and at each sprint/iteration

Single CDRL with minimal requirements was requested
- To be provided 30 days post award, as opposed to with submission, allowing time to work details
- Content was viewed to be realistic and necessary to maintain oversight

Products delivered with RFP were minimal, predominantly contractor format, and allowed the customer to quickly assess cost and schedule approach
- Reduced production, review, and negotiation time

GPOC willing to share best practices

Ander Swanson, Contracting Officer, GED SG SPO
email: swansoan@xxx.ic.gov
Open phone: 703-808-8195
Secure phone: 850-8195
Other Useful Exemplars

• NISCC 2 (under OASIS IDIQ)
  • Structuring CDRLs/DIDs to allow contractor format supporting agile devt techniques

• Space Enterprise OTA Consortium (SpEC)
  • Process is well-defined but flexible
  • Open access to acquisition team up to proposal submittal. Some benefits:
    • Much less overhead and documentation for submissions
    • Typically shorter timelines from “industry day” to proposal submission (often within 30 days) as well as proposal submittal to award announcement

• Iron Patriot
  • 15-day cycle from posting a solicitation to proposer submit
  • 15ish-day review period followed by award
  • Proposal is greatly simplified (set of charts and cost data) to cut down on effort to both create and review the material.
    • Initial, short chart package with technical approach and costing provided early on to allow down-select and to fine tune more formal response
Discussion and Next Steps

Proposed Process

Focus: Right-sizing CDRLs

- Obtain Government down-selected CDRL list from Confluence
- Research other sources: 18F, USAF, DHS / USDS, etc.
- Gather RFPs from exemplar programs that have actually worked
- Poll IAWG contracting and PM experts
- Cross-walk for alignment and outliers
- Conduct Government-Industry round table to converge
- Outbrief to IAWG, USGIF-wide, and QUINT SPO
Government Perspective
Open Dialog

Additional Topics for Consideration

Actions & Next Steps

No-Host Social
NRO IAWG Contact Information

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- Ann Waynik: Ann.Waynik@tenica.biz  (571)-376-5641
- Mike Moran: mmoran07@peraton.com  (571) 524-1184

USGIF coordination:
- Shai Sobrino: shai.sobrino@usgif.org  (571) 392-7205
Government query at last QUINT SPO interaction

Potential options
1. GED as repository provider / administrator for program level development (status quo)
2. GED Government Open Source & GOTS manager across NRO/Community
   a. Providing code as Govt Open Source (GFE style model)
      - Controlled eco system
   b. GOTS / open source mgr where other agencies could self-select
      - Repository open to other agencies
      - Open eco system

Concept idea: Use a commercial open source mgt approach on an acquisition

Next Steps: Understand goals of taking on a GOTS/GOSS management role
   - Speed & Cost?
   - Agile adoption?
   - Economies of scale?
USAF RFI: Contracting for Agile Dev 1

• RFP & Contract Information/Artifacts
  • What information should be made available in the market research phase to better inform your recommended approach(es) to the government? What artifacts would provide value in terms of proposal development? (i.e. notional backlog, end-user commitment, technical debt, software assessment, current SDLC and labor structure).
  • What common CDRLs, DIDs, and clauses do you consider as being Agile anti-patterns?
  • What RFP/FOPR artifacts are required in proposals that are of questionable value to the evaluation process and/or subsequent Agile performance?

• Contracts Language/Specifications
  • Identify contract type(s) you feel would have the greatest potential of encouraging truly Agile behavior? Please provide rationale.
  • Recommendations on changing contractual language from specifying how work is to be completed to focus more on the expected productivity and quality of work?
  • Thoughts on adjusting pay for based on productivity and/or quality of work?
USAF RFI: Contracting for Agile Dev 2

Using the Product Owner-Scrum Master-Dev team triad as the starting point, provide your thoughts on:

- Contracting Officer Representative as Scrum Masters
- Government Program Managers as Scrum Master
- Government Program Managers as Product Owner
- Contractor Program Manager as Scrum Master
- Incorporating 3rd party contracted personnel to round out a Development Team
- 3rd party contractor as Scrum Master or Agile coach

Implementation

- If sufficiently informed by market research, should appropriate Agile methodology (i.e., Scrum, XP, etc) be dictated by government in RFP/FOPR or left to vendor’s discretion?
- Pros and cons of 1) govt/BES-provided CI/CD pipeline & development environment, 2) contractor-provided CI/CD pipeline & development environment, and 3) hybrid approach
- What is the impact of having more than one vendor supporting an Agile program?
- What should a generic “definition of done” for sprints, increments, and releases contain that would deliver value to the government while providing sufficient protection to the development team?
GOSS/GOTS Management Operating Model: PMO Function for Product Management

User community provides fast and comprehensive feedback

Feedback on functional needs and issues (e.g. usability)

Faster and more immediate and more accessible than in traditional setting

Helps prioritization and triage of features and road maps

User community is source of user innovation

Source of new feature ideas and insights

Helps find new application ideas

Community gets product management closer to user.
GOSS/GOTS Management Operating Model: PMO Function for Engineering

User community provides fast and comprehensive feedback

Fast feedback on functional and non-functional issues (bugs, performance, …)

Also for most unusual circumstances

User community extends core solution into new applications

Users can help themselves and develop free open source add-ons

Effectively, free mission usability research and exploration

Pre-screening of potential future GOSS Application contributors
NRO IAWG Data Call

- Unintended Consequences of AF/IF
- Getting Industry Feedback on FGA architecture
NRO IAWG Action Team

Hybrid Cloud Action Team

Chris Arroyo (Team Lead)

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Identify Approach: Hybrid Cloud Model Implications

- **Increased flexibility** - Competition is a *good* thing and GED can leverage this for increased savings.

- **Sunk Costs** - have you broken down the cost to migrate to the cloud and factored in investments already made?
  - Implication is that it may not be cheaper to move to the cloud

- **Attracting the right talent** - *Cleared* Cloud expertise can be difficult to recruit

- **Data and Operational Complexity** - Multiple clouds increase management complexity

- **Ownership** - Is there a clear understand on who owns what?
Decision Authority in Hybrid Cloud Model

• Whether it’s GED leadership or program managers, everyone with a stake in the process should be involved.
  • Understand cost / benefit of allowing developers to choose cloud of their choice
• Data to be considered should be gathered through the following:
  • Cost benefit analysis
  • Comparative performance analysis
  • Metrics established for expected performance advantages.
• It is important to thoroughly consider pros and cons in each option before deciding to migrate to the cloud.

Source: General Services Administration
Hybrid Cloud Model: Framework - Business Model Impact

• Different models will have different impacts - Mission needs will direct GED to different models

• Conduct a Pilot - Use a subset (approximately 5%) of locations or users that are a close representation of the whole, to conduct a pilot. The purpose of the pilot is to determine the following
  • Anticipated costs
  • Capacity/resource usage
  • Services needed to support the cloud
  • Acquisition contract type needed

• Different Models = Different Costs - Build a business case based on a clear understanding of the costs around:
  • Data Migration
  • Integration and Testing
  • Consultants

Source: General Services Administration
Hybrid Cloud Model: Framework – CSP Exit Plan

- **Risk Management** - Identify, in writing, a plan for addressing risk across the directorate, acquisition, security, etc.

- **Address Exit Plan EARLY** - Clearly understand from both government and industry what and who needs to be involved when leaving your cloud service provider
  - Clearly understand ownership rights for data and applications

- **Develop a clear SOP document** - should accomplish the following:
  - Roles of CSP, Federal government and any other interdependent Subject Matter Experts
  - Continuous monitoring related to Security & Vulnerability analysis
  - Actions to conduct (and responsible Point-Of-Contact (PoC)) during a security incident
  - Regularly test the SOP’s and update with current PoC information details as needed.