NDIA PMSC Meeting Minutes

Joint Government/Industry Meeting – August 15, 2012

1. Tracie Thompson, PMSC Chair, called the meeting to order, welcomed all the attendees and reviewed the day's agenda. It was noted there was an addition to the agenda - Jerry Jones (FAA) will discuss the Civilian Agency Industry Working Group.

2. Bill Altman from Battelle and NDIA PMSC Board member provided the logistics information for the meeting. Bill mentioned that the PMSC is looking for a company to host the next meeting in the Jan/Feb timeframe. Bill introduced Dr. Jeff Wadsworth, President and CEO, Battelle Memorial Institute.

3. Dr. Wadsworth provided the official Battelle welcome to the attendees and discussed Battelle's commitment to program management. Battelle was founded in 1929 as a non-profit charitable trust. The company was founded to improve the human condition through innovation. Today Battelle generates $6.5B annually in global R&D and oversees 22,500 employees in 130 locations worldwide. Battelle runs numerous well known labs at the forefront of science and technology across the US and UK.

   The scope and complexity of their projects require strong program management skills. Dr. Wadsworth discussed a success story in project management and one not so successful. He described the root causes of the project that was not successful. Likewise he discussed the lab at Oak Ridge that was completed on schedule with an underrun.

   Battelle is one of the nation's leading charitable trusts supporting education in science, technology, engineering and mathematics. He noted that they determine contributions based on the program management skills of the recipients.

4. Introductions of all the attendees were made.

5. The notes below are supplemented by the charts presented by the speakers which will be posted to the NDIA PMSC website contingent on speaker confirmation that the charts can be published.

6. Wayne Abba, PMSC board member, introduced the keynote speaker, Mr. Joe Dyer (iRobot Corporation). Mr. Dyer noted the importance of collaboration between government and industry to achieve a successful program outcome. Mr. Dyer discussed disruptive technologies and innovation and stated that EVM can potentially be a disruptive technology when properly implemented and combined with the right principles such as a sound WBS breakdown and weight measurement.

Mr. Dyer continued by discussing the history of iRobot and the building of management system competencies over time. He pointed out that EVM is often met with resistance. He theorized that an explanation could be the focus on compliance versus showing the value of having an effective system. In turn, for smaller companies especially he noted that tailoring requirements vs "once size fits all" could be beneficial to all parties.

"Success is dependent on us being stewards of the whole and not just owners of the parts" – this is the key to a successful program outcome. He believes earned value as a tool is something that fits this quote. He provided his list of the pillars of a good program.

7. A break was taken

8. Bill Altman introduced the next speaker Dr. Josef Oehman (Research Scientist at M.I.T.). Dr. Oehman discussed his presentation "Guide to Lean Enablers for Managing Engineering Programs". MIT motto – "theory and practice". Study was to identify best practices and integrate theory and practice. 42% cost overrun during RDT&E phase. Average schedule overrun is 22 months. Therefore, room for improvement. Study identifies 10 core engineering program challenges and describes 43 best practices across 6 areas.

   Programs fail or succeed primarily based on people, not processes or tools so a focus on people has to be present (selecting the right people, developing them, evaluating them, etc.). 3 factors lead to better performance and personal satisfaction – autonomy, mastery and purpose. Also need to understand and define program value. This speaks to the need for defined requirements and upfront planning. Need to optimize the value stream – eliminate waste in processes and minimize handoffs (create flow). Pursue program perfection – manage uncertainty and risk and implement the proper management standards. Dr. Oehman noted that a comparison of successful/not successful programs showed a statistically significant use of lean enablers in successful programs.

9. Nadim Kneizeh (DCMA – Policy and Tools Branch Chief) presented the EVM Division Update. Nadim first noted the passing of Mr. Robert Michael Francis who was the Director, Engineering & Analysis for DCMA HQ. Nadim discussed the current policy instructions (Compliance Review Instruction – plans for update and streamlining in work with a target 4Q12 release date, Standard Surveillance Instruction – also plan to update by 4Q12, Interpretive Handbook which establishes guideline assessment criteria – in work and anticipate 1Q13 release, and Program Analysis Pamphlet – incorporated PMSC comments and will continue to improve the document). Nadim discussed the policy hierarchy (Instruction to Handbook to Pamphlet to Standard Operating Procedure). And that policy documents are reviewed annually. DCMA is working to better document their policies and work. Nadim noted that DCMA will seek PMSC input as new instructions are developed. Instructions are available on the public webpage: http://www.dcma.mil/

Nadim also discussed tool use by DCMA and the goal to standardize across the organization. DCMA is exploring the creation of an EVMS dashboard for ACAT I programs. DCMA will use data from the central repository to populate the dashboard. The "compliance engine" being used on a prototype basis in compliance reviews will be improved over the next year. Once completed the use of the tool will be integrated with their instructions.

10. The lunch break was taken

11. Buddy Everage, PMSC board member, introduced Bob Miklos, EFCOG project management working group chair and Michael Peek, DOE Office of Acquisition and Project Management. Mike discussed the DOE organization and locations, the budgets and projects under each area, and the role of his office (oversight role for DOE projects > $100M and monitor project performance for all projects > $10M). Mike discussed the DOE peer review policy, rationale and process. Bob discussed the EFCOG working group support of peer reviews and how the project management work group operates.

12. Neil Albert, PMSC board member, facilitated a panel discussion on OTB/OTS with various government representatives. Participating on the panel were Gordon Kranz (PARCA), Shannon House Jenkins (USAF), Jerry Jones (FAA), and Tim Loftis (MDA). Neil discussed the recent AFIT study on OTB/OTS and his recommendation that since CPI does not improve post OTB they should not be performed. Neil mentioned that on industry day a comparable panel discussed OTB/OTS and today we would get the government perspective on the subject. Jerry noted that FAA does not do them but do issue contract modifications to incorporate the re-baseline. Shannon noted that USAF policy will require notification of her office prior to implementation as well as other processes as completing an SRA. Tim noted MDA policy changes that scrutinize OTBs, notably S=P=A adjustments. Gordon noted that the root cause analysis reviews study OTBs. Gordon noted the "baggage" that is associated with the implementation of OTBs. He stated that in the end it is a replan and there are times where it is necessary. His focus is "how do we ensure we don't follow a "bad plan" with another one"? Focus should be on how we will execute the program and let the mechanics follow.

Shannon addressed the issue of programs needing multiple OTBs. Typically this happens because the behaviors/issues leading to the first OTB not really being addressed. Additional issues relate to not capturing the true total cost of the program in the original OTB. Gordon stated that he believes replans should be accomplished when necessary – that may or may not lead to an OTB but he considers that a mechanics discussion (although clearly additional budget and funding have to be addressed through the decision making process). Neil and Shannon noted that OTB/OTS should be viewed as a program management tool and process not just an EVM activity. Jerry noted that since FAA processes a contract modification, they capture the reasons, performance history, etc on OTBs. The panelists agreed that better planning leading to IBR would go a long way

toward reducing OTBs later. Gordon noted they are drafting an update to the OTB guide and will provide PMSC a chance to provide comments to it.

13. Jerry Jones provided an update to the Civilian Agency Industry Working Group. Goal of working group is to accelerate the growth and efficiency of EVMS across the civilian agencies. Jerry noted that Bob Rovinsky is in the process of retiring and will transition the leadership of the working group to Jerald Kirby of NASA. Tracie Thompson will co-chair the working group.

14. Gary Bliss, Director of PARCA, addressed the areas that PARCA performs other than their EV role/responsibility. (No charts). Gary noted his requirement by statute to perform reviews on MDAPs. Here is his list of "how to make your projects fail":

    a. Poor cost and schedule estimate that establishes the baseline from which performance will be measured. PARCA evaluates whether data was available at the time demonstrating that the cost or schedule estimate was risky. Gary noted that cost analysts know how to sum of the costs. Typically a bunch of inputs are wrong – what is the root cause? The common theme is a bad set of "framing assumptions". These are not specific items like # of lines of code. Example – Oct 2001 was F-35 milestone B. Major assumption was that the design was more mature than any other aircraft at the same point in time. This drove many items including program concurrency (production can be concurrent with development because the design was "mature" and there would be limited retrofit). This framed the entire program plan (ie the cost estimates and schedules). Gary stated the sin was that in 2004 when the weight program was uncovered no one challenged the original framing assumption that the design was mature. To correct this, future reviews will challenge the framing assumptions and ask if the assumption is false what metrics will we use to see that the assumption is not correct.
    b. Don't pay attention to system engineering – treat it like a bunch of document requirements. There must be intellectual rigor and depth and maintenance of those processes. Issues arise when basic system engineering functions not performed. Requirements definition, identification of all interfaces, etc. Focus should not be on completing the documents but having a rigorous process of system engineering and measuring with the right metrics.
    c. Open loop management control. Nothing more than the claims process office to pay the contractor. Govt project office is not on top of the execution status of the program. EV information is a key part of this.

15. Gordon Kranz (PARCA EVM Director) discussed the OSD EVM requirements, specifically the new IPMR DID and WBS Mil-Std. Intent is to reduce the administrative burden but increase the value of EVM. PARCA has prepared a 3 hour training class on the IPMR. Gordon will present the training information at the IPM conference in late October. Training slides will be put on the PARCA website.

Gordon mentioned that there is a concern that cost analysts (CAPE) could sometimes drive the WBS requirement to levels that are not appropriate for the management of the program. WBS level can drive the # of control accounts and the # of control accounts can drive the administrative cost on a program. PARCA owns the WBS Mil-Std in order to try and ensure that WBS requirements are set appropriately.

He noted that PARCA is engaging in the discussion of tailoring vs waivers relative to EVM requirements. Do not always need a waiver when some tailoring is appropriate depending on contract type. Gordon noted that the EV requirement should be placed on the work that is applicable. In some cases, there may be some portions of a contract that are not applicable (T&M) that should not be included in the contract total which potentially sets the requirement.

IPMR sets the overall conditions. It can be tailored to specific program conditions. DID was effective July 1, 2012 (new RFPs after July 1). Gordon showed a matrix comparing the 2005 DID, the initial draft DID in Oct 2011, the status of the draft in Feb-Apr 2012 and the final version in Jun 2012 (in total and by format). The changes over time show the adjustments made from PARCA's collaboration with industry input. In the end no change to submittal time requirements. Biggest change is the reduction in the variance analysis requirements.

IPMR Guide is being published to enhance and clarify the information in the DID. It does not add new requirements. Gordon stated if it appears that the guide adds more requirements then PARCA needs to know as guides never add requirements. He does not have a specific update cycle at this time.

16. Buck Wilkerson of Humphreys and Associates facilitated a panel discussion on scheduling. The panelists were John Scaparro (NAVAIR 4.2), Donna Holden (DCMA), Ken Poole (NASA), Joshua Anderson (Raytheon), Yancy Qualls (Bell Helicopter), PJ Pietrandrea, and James Rianda (Northrop Grumman). Buck noted that the panelist all were key contributors to the creation of the PASEG.

Buck noted that one primary scheduling topic where there is disagreement between the scheduling experts is the use of schedule margin. Josh noted that in retrospect the dialogue around schedule margin focused almost solely on the mechanics of schedule margin vs the common understanding that margin will generally lead to more successful schedule performance. John noted that what he disagrees with is a program that arbitrarily shortens schedule spans to artificially create margin. Donna reiterated this point.

The panelists discussed the interaction and potential distortion involved in schedule margin and the use of SRAs. John noted the difficulty in process discipline, resource management, etc. when distributed schedule margin is employed. John noted that his interpretation (as stated in the IPMR DID/Guide) of margin is that it is acceptable for margin to exist prior to a milestone but that it should not have a discrete task successor.

No budget should be assigned to a margin item. Josh noted that the PASEG and IPMR DID are consistent but that the guide introduces the requirement that margin cannot be tied to a discrete task. Donna noted that all the PASEG discussions centered on the government opinion as John stated.

There was discussion around the IMP/IMS guide around direction concerning critical path and Josh noted the PASEG team requested PARCA to evaluate that guide and determine if updates were necessary. Gordon noted that PARCA does not officially own this guide but he is aware of the need to evaluate.

Buck asked the panelists about an IMS in LRIP without duplicating the MRP data. Yancy described a method on how to model the major assembly sequence and critical part deliveries without having to include all MRP items. John noted NAVAIR asks for "jig lock" information within the schedule which is consistent with the modeling process Yancy described.

Buck asked the panelists about scheduling in a dynamic environment such as software development (where agile is often utilized). John gave his opinion that agile does not tie well with EVM due to the uncertain scope that is often associated with agile planning. Donna stated that software engineers have a significant amount of metrics and encouraged the audience to listen to them to develop the schedule and EVM baseline.

17. Tracie concluded the meeting by mentioning that Dr. Oehman would provide additional "Lean Enabler" guides if you contact Tracie with your information. She reminded the search for a host for the next PMSC meeting. Thanks were given to Battelle for an excellent meeting. The meeting was adjourned.