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| **Facilitator Name: Amber Gilbert** |
| Table Topic: Cultural Implications and Evolution Needed for Continuous SETRs in DMM Environment |
| 1. What mindset shifts would be required to implement continuous SETRs in a DMM Environment?    * 1. PMs      2. Leadership      3. PK      4. FM 2. What skillsets would be required?    * 1. Education      2. Training 3. How do we break down the "grading our homework" mentality when it comes to reviewing deliverables for SETRs?   ---------------------------------------  **Table Attendees:**   * Amber Gilbert, DAF DTO (facilitator) * Marc Tang, Northrop Grumman DTO * Joe Sciabica, Dayton Development Coalition * Stephanie Sposato, MIT Lincoln Laboratory * Myriam Newman, Northrop Grumman Aerospace Systems * Tom McDermott, Stevens Institute of Technology (SERC)   ---------------------------------------  **Participants’ stickies & notes:**  Question 1:   * Live data in the model/ASoT * Data access, protection, and management * IT and infrastructure * Emphasize all functional areas and how they impact each other * Goal needs to be long-term success, not just getting past milestone * In my experience, all major program decisions were made outside of SETRs. It was the decisions that should’ve been more timely that unfortunately waited for a SETR. Need to fill those holes. * Sometimes the big conflicts are PM vs functional managers. Hopefully the continuous SETR process and data visibility will resolve those faster. * It is communicating the decisions across the whole team that the SETR helped. How can the whole team get that value in a continuous SETR? * The IMS process which is based on these milestones would need to be revamped * Building trust in tools and data * Right bodies in place * It’s okay if the data changes * Need PLM to effectively track versions of what is being reviewed at what time * Need different ways to plan and track work * Still need a PDR/CDR as checkpoints * AI to process and summarize lots of data * Entrance and exit criteria don’t have value w/ a continuous review * Continuous review process – iterative validation and verification – ongoing * Data-centric – Model based digital artifacts * Operate in collaborative environment – everyone has visibility * Flexible requirements process * Proactive risk management – HAVE to accept risk * Leverage AI * Agile development tools could apply * Systems of systems thinking * Okay not to have paper/PowerPoint/PDF * Need to be comfortable w/ models and “agile” * Different deliverables to document hardware * Different artifacts to assess progress   Question 2:   * Data literacy * Digital fluency * Data driven decisions * Process leaders – Requirements/Capabilities * Program management and analysis – decision making * Data insights & integration – access, visualization, integration, transmission * Risk management – what if/back up, cyber, etc. * Need to improve model-literate workforce   Question 3:   * Automate grading * Human focus on connecting environments * Implement collaborative, blameless reviews * Collaborate iteratively to solve problems (instead of SETR being a “grade” for contractors) * This is whole team review/resolution of design and program details, not box-checking exercise   ---------------------------------------  **Facilitator’s Discussion Notes**:  ***Question 1: What mindset shifts would be required to implement continuous SETRs in a DMM Environment?***  *Any* leadership decision point needs to have leaders willing to use live data, digital models, and dashboards—rather than locked down, static, “pretty” data. It needs to be okay if the data changes; that means we’ve been doing work, because it’s live/real-time! Not only does leadership need to be committed by living the life, but also by shutting off old ways of doing things (old tools, data repositories, etc.). You can’t accelerate adoption of new ways otherwise.  All people need to work from the same live data BUT with customized and easily customizable views based on viewers’ roles and preferences.  We need continuity across leaders to support and use digital (not a different reporting requirement every time someone on the team transitions elsewhere), and we need consistency across the enterprise (not doing something different for every program).  One way to help with consistency across our culture without stifling innovation: If there’s a preferred enterprise tool, provide that tool and associated training to all programs across the enterprise FOR FREE. Don’t block programs from choosing to use other tools if the free one doesn’t serve their needs, but incentivize use of the preferred option; provide a pathway for them to get/use other tools, but make it clear that the program is responsible to pay, maintain, and train for the alternative tools themselves.  Change from the readahead mentality (final version is submitted to decision-maker at least 2 days, 30 days, etc. in advance and not changed again until after meeting) to being comfortable with things looking different between today and 2 days ago, because again, that means we’re doing work and working from real-time or near-real-time data.   * FROM: Stop work gather all data, polish it for days or weeks or months, then present to SPO for either a thumbs up or finger-pointing, then finally continue work again based on response to the review. * TO: Same or similar exit/entry criteria as now, but we’re continuously assessing ourselves against them, so problems are resolved real-time and the approval comes once we’ve achieved the criteria—which we know because we’ve all been working together from the same data this whole time.   Needs to truly be a system review, not an engineering technical review.   * It’s critical to review real-time insight across ALL functional areas, including the interplay and impacts they have on each other. * The whole team needs to have shared ownership of the project and participate in collaboration across the board.   Eliminate data calls. Implement real-time awareness for the whole team and decision-makers.  Often SETRs highlight mismatches between program management and other functional areas. Leaders and functionals all need to agree to work collaboratively from the same, shared dataset. Cross-integration of functionals is crucial! We cannot have “this is my data and no one else can see it” or “your data doesn’t matter to my job” mindsets anymore. Understand how all functional affect each other! All need to understand the larger context within which they’re working, including clarity into each other’s requirements, progress, and the resultant impacts to others.  Today, people blindly trust that confident-sounding presenters and/or pretty slides are truthful, and that accurate and appropriately rigorous work went into creating the presentation. But people will turn around and doubt that same info from digital sources. We need to help people understand their data so they know how to trust it.  Include an operations perspective in and during acquisitions—your rhythm for manufacturing, test, and ops units will differ from the usual acquisition rhythms. Do our acquisition processes and timing mesh well with and support these other areas?  ***Question 2: What skillsets would be required?***  We still need solid skills and capabilities in all the different functional areas!  Data literacy and digital fluency are required for all team members.   * Leaders: Be comfortable with models and dashboards, not PowerPoint, Word, and PDF as the primary or only way they allow people to give them info. Do not tell your team to work digitally while also requiring them to provide you with “paper” products/deliverables. * All: Be comfortable with automated data transfer across the team, instead of manual data handling. * All: Understand what data informs your job and your “view” of the data—understand what makes your data good, and when your data is/isn’t good (you’re getting the right pieces of data, they’re incorporated into analyses that matter for your job correctly, and they’re accurate and up to date).   Data literacy includes knowing what your data is, where it comes from, how it’s prepped/analyzed to form your “view” of it, and how that fits into the larger context of your systems and processes. Digital fluency includes training people on the available tool suites, how to prep and analyze data, and how to understand the resultant info to make decisions. Bonus: This builds trust in data/tools and increases people’s understanding of your data and tools’ capabilities AND limitations.  How we break down and track work needs to become more agile across the board, instead of having a waterfall mindset in not only how we define requirements, but also how we do work planning and track progress. BUT don’t force “agile” where it doesn’t fit. The critical piece is using, and understanding how to use, data integration and visualization.  For all new skillsets, give people time not just to learn about the data or how to use each tool, but also to learn how to do their specific jobs with those data and tools. Allow extra time for your older SMEs; they’re learning a totally new way to work and have more to unlearn!   * Provide people “helpful info” and “job guides” (almost like recipes) to walk them through the info they’re seeing and how to use the available tools to do their different tasks. * Include on-the-job training where people are doing their jobs, and AI can help them understand real-time how to use their tools. Example: There’s an AI tool that’s almost like a modern version of Clippy, where you can overlay it with a number of commonly available tools, and when you’re using the tool, it can pop up like, “I noticed you seem to be having trouble with…” Or you can actively ask it for help on how to do something, and it’ll help you learn how to use the tool while actively in the middle of doing the task.   Learn how to do mission engineering and tie to our requirements engineering!  ***Question 3: How do we break down the "grading our homework" mentality when it comes to reviewing deliverables for SETRs?***  Need blameless collaboration. We’re working together to achieve shared goals, not here to take advantage of each other or point fingers. Just because something goes wrong, that doesn’t mean digital doesn’t work! Or that people are trying to be shady.  Would help to have technically trained leaders so they understand that no design and development process happens perfectly.  The “zero trust” mindset is opposite of what’s helpful to collaboration. Better collaboration happens by minimizing limitations on data-sharing across shared projects. “Zero trust” to minimize what data individuals or functionals can see on a shared project is a cousin of the mentality that causes SETRs to have a “grading” culture instead of SETRs being a marker of shared progress/success.  The concept of contract deliverables and today’s DIDs are driving a non-continuous, “SETRs are a grade for the contractor” culture. Deliverables are obsolete NLT time of delivery (often earlier than that). Milestone-based deliverables aren’t helping us move forward, especially since they all have to be fully completed well in advance of the milestone review itself. We still need solid requirements and planning processes, but today’s DIDs and related efforts to just digitize existing processes won’t cut it. We need to update our processes so they serve today’s needs (including things like having continuous reviews), and make sure approaches to deliverables and DIDs actually work with and encourage the behavior we want to see. Continuous assessment of our progress against entry and exit criteria would help shift those criteria to become markers of shared progress, rather than a grade that must be achieved. |