Working Group Outbrief

Ground System Architectures Workshop

Session 11E
Adopting Agile Ground Software Development

Supannika Mobasser, The Aerospace Corporation
Ground System Architectures Workshop

Session 11E

Participants

- Tim Abel, Aerospace
- Hamad Alhazami, MBRSC
- Mahmood Al Nasser, MBRSC
- Patrick Barnies, JETSI
- Sheri Benator, Aerospace
- Andrew Borden, Aerospace
- Justin Boss, Kratos
- Steve Butler, ASRC Federal
- Jay Bugenhagen, NASA-GSFC
- George Davis, Emergent Space Technologies
- Carl Frustton, r3Space Consulting
- Fred Hanck, Digital Globe
- Haisam Ido, KBR Wyle
- Ron Jones, ASRC Federal
- Sharon Orsborne, NASA-GSFC
- Paul Swenson, ASRC Federal
- Curt Holmer, Aerospace
- Joe Kennedy, General Dynamics
- Che-I Lien, Aerospace
- Joanna Li, Aerospace
- Sue Mobasser, Aerospace
- Dewanne Phillips, Aerospace
- Kanshik Shal, Aerospace
- Adam Waller, Exigo Corp
# Ground System Architectures Workshop

## Session 11E

### Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation and Discussion</th>
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<tbody>
<tr>
<td>1:00 – 1:30pm</td>
<td>Session Overview</td>
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<tr>
<td>1:30 – 2:15pm</td>
<td>“Smashing the Stovepipe”</td>
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<td>Paul Swenson, ASRC Federal Space &amp; Defense</td>
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<td>2:15 – 3:00pm</td>
<td>“GMSEC Services Suite - An Agile Development Story”</td>
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<td>Vuong T. Ly, GSFC, NASA</td>
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<td>3:00 – 3:15pm</td>
<td>Break</td>
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<td>3:15 – 4:00pm</td>
<td>“Re-visit Agile Lessons Learned from previous GSAW”</td>
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<td>Supannika Mobasser, The Aerospace Corporation</td>
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<td>4:00 – 5:00pm</td>
<td>General discussions</td>
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<tr>
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<td>• Agile Acquisition Models</td>
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<td>• Milestones and Deliverables; Roles and Responsibilities</td>
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<td></td>
<td>• Agile and other disciplines</td>
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<td>• MBSE, hardware-intensive subsystem, accreditation, etc.</td>
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<td>• How to measure success</td>
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<td>• Trust management</td>
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Pain points on Agile

- Balancing between rigor and agility
- Cultural changes, adjustment, resistance
- Expectation management
- How to show progress & how to do measurements
- Not quick enough turn around time
- Work only when the team is ready
- Pain from optimization
- Switching midstream
- Misuse of Agile
Agile roles

- Scrum master, product owner, development team
- If government is the PO – need continuous commitment
- Agile coach
- Subject matter experts, users
- Overarching system engineer
- Integration team
- Testing:
  - Integration testing, enterprise/operational testing
  - Multiple level of regression testing
What does agile leadership look like?

- Willing to change / flexible
- Able to accept failure
- Have right people on the right seat
- Great communication
- Recognize different ways to measure progress/ productivity
- Speak in common currency
- Support team dynamic
- Know what to look for
- Delegate well
Metrics / How to measure success?

- Working SW / business value
- Trend rather than individual / day-to-day metrics
- Does not have to be numbers
- Team happiness
- % on track, % late, % not started
- Predictability vs Productivity
- Tie metrics to program success (big picture)
- Personnel turnover
Trust Management between government and contractors

- Honest communication, open dialog, no surprise
  - What works, what doesn’t work
  - Roadblocks, decisions
- Professionalism
- Joint success culture
- Need time: typically around one year
- Integrated demo when appropriate
- Well-informed reduce micro management
- Level of shared information depends on what you need to see
- If not useful, stop doing it