AGILE WITH SCRUM AND CMMI®
Working Together to Create True Organizational Agility
MEET OUR PANEL

Michael King
Chief Technology Officer

- Experienced technology leader within the Federal contracting industry
- Focuses on providing excellent technology solutions to customers and internal employees with the tools they need to serve their customers
- Previous role: Chief Operating Officer at Halfaker
- Bachelor's in Computer Engineering from UVA, Master's in Information Systems from Johns Hopkins
- Certification: PMP, PMI-ACP, and SAFe SA
Jeff Dalton
President & CEO

- Veteran technologist and leadership coach with over 30 years of experience
- Certified CMMI Lead Appraiser
- Principle author of CMMI Institute’s “Guide to Scrum and CMMI: Improving Agile Performance with CMMI”
- Author of new book “Great Big Agile: an OS for Agile Leaders”
- Past titles include: Chief Technology Officer, Chief Technology Executive, VP of Product Development, CEO, and Agile Evangelist
- Past Organizations: Hewlett Packard, Ernst and Young, Polk, AgileCxO
MEET OUR PANEL

Ron Lear
Chief Architect & Director of IP Development

• Over 34 years of experience leading performance improvement, quality, and process management efforts

• Certified High Maturity Lead Appraiser (CHMLA) & CMMI Instructor

• Experienced Capability Maturity Model Integration (CMMI) consultant with over 300 appraisals completed to date

• Experience includes executive and management roles for product and solution development, service delivery, supplier management, Agile, DevOps, and CMMI High Maturity-based development and services efforts

• Chief Architect and core member of the CMMI V2.0 Development effort
AGILE IS...

• A high-trust way of collaborating
• A commitment to a core set of agile values
• A focus on business value
• An assumption of good intention
• An agreement to share information openly and transparently
• Agreeing that no job is beneath you
• Self-organizing
80% of teams are at or below “Still maturing” with Agile.

63% of corporate leaders have a philosophy that conflicts with core agile values.

60% of IT organizations have less than half of their teams practicing agile.

47% of teams lack experience with agile methods and techniques.

51% of tech leaders do not have leadership skills needed for large-scale agility.

45% of teams lack management support.

Source: 2017 State of Agile survey & Agile CxO Partners Assessment of over 200 organizations.
THE AGILE PERFORMANCE HOLARCHY®

Define, deploy, project, and sustain agile values so that your team understands the expectations for organizational agility.
**VALUE:** Teams/customers value regular personal interactions with leaders

**QUESTION:** Has the leader interacted with each team/customer once per week on Agile values?

**INDICATOR:** Number of exceptions reported by teams/customers

<table>
<thead>
<tr>
<th>Adopting Level Outcomes</th>
<th>Transforming Level Outcomes</th>
<th>Mastering Level Outcomes</th>
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</thead>
<tbody>
<tr>
<td>✴ Agile values are traced to frameworks, ceremonies, and techniques.</td>
<td>✴ Agile teams use defined frameworks, ceremonies, and techniques.</td>
<td>✴ Leaders at all levels of the business use defined agile frameworks, ceremonies, and techniques in their everyday work.</td>
</tr>
<tr>
<td>✴ Constraints and impediments are identified and eliminated.</td>
<td>✴ Backlog that defines future state of performance is maintained.</td>
<td></td>
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</table>

As an agile "servant leader", I want to mentor and engage with Agile teams to ensure agile values are being embraced and remove impediments to their adoption.
**VALUE:** Teams/customers believe leadership’s role is to serve teams and help make them successful

**QUESTION:** Is the leader removing active impediments

**INDICATOR:** Impediments backlog burndown

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<tr>
<td>✗ Agile performance levels are identified for each holon.</td>
<td>✗ Agile teams are trained on Agile Keys.</td>
<td>✗ Heartbeat Retrospectives are held.</td>
</tr>
<tr>
<td>✗ Agile Keys for each level are used as-is, or customized for local context.</td>
<td>✗ Agile teams use Agile Keys to transform the way work is done.</td>
<td>✗ Improvements from Retrospectives are implemented.</td>
</tr>
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</table>
LEADING: VALUING

As an agile leader, I want to define, deploy, project, and sustain agile values so that my team understands the expectations for organizational agility.

VALUE: Teams/customers believe leadership / the owner of organizational culture

QUESTION: Has the leader clearly defined the culture and values of the organization?

INDICATOR: Percentage of ceremonies and techniques that are aligned with values
LEADING: VISIONING

As an agile leader, I want to set and communicate a vision compatible with agile values so that we can develop a healthy Agile organization.

**VALUE:** Teams/customers believe leadership is projecting an Agile vision for the future

**QUESTION:** Do all team members understand the vision?

**INDICATOR:** Number of team members who can identify the cultural vision in a survey
CMMI is an excellent choice for strengthening agile so that it can scale and succeed for projects of any size or complexity
CMMI HELPS AGILE DELIVER ON ITS PROMISES

- In 2018, 80% of CMMI appraisals conducted around the world were by organizations using Agile development processes. They have found that CMMI:
  - Scales and strengthens Agile implementations
  - Brings disparate agile projects to an organizational level
  - Addresses business problems outside the scope of Agile approaches such as managing and delivering services and suppliers, configuration management, etc.
  - Ensures that improvements are continual and always performance-focused
PRACTICAL INSIGHTS TO ADOPTING CMMI

• New to the V2.0 Product Suite, we have a simple and straightforward 6-step approach to adopting the CMMI (or transitioning from V1.3)

• Multiple types of context specific information for Development, Agile w/Scrum, Services and Supplier Management with more to come, scalable and sustainable over time

• Open architecture that lets you fit the product suite to YOUR business needs – completely customizable to address key pain points and performance areas
Processes, methods, and values, like Agile, are part of an organization’s culture. CMMI V2.0 provides a proven and measurable means to improve both culture and performance simultaneously.
FOR REFERENCE: CMMI V2.0 DIRECTLY ADDRESSES AND IMPROVES AGILE ENGINEERING EXCELLENCE PRINCIPLES* - 1

<table>
<thead>
<tr>
<th>EE Principles 1-4</th>
<th>CMMI V2.0 Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our highest priority is to satisfy the customer through early and continuous delivery of valuable software</td>
<td>Methodology-agnostic best practices on customer satisfaction and value statements for each practice</td>
</tr>
<tr>
<td>Welcome changing requirements, even late in development. Agile processes harness change for the customer’s competitive advantage</td>
<td>Requirements Development and Management and Configuration Management Practice Areas for rapidly and consistently addressing customer changes</td>
</tr>
<tr>
<td>Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale</td>
<td>Inclusion and best practices for rapid development and agile with Scrum example activities and work products throughout the core V2.0 Practice Areas</td>
</tr>
<tr>
<td>Business people and developers must work together daily throughout the project</td>
<td>Holistic view of organizational Governance roles, responsibilities and practices that guide continual review with affected stakeholders throughout the development process</td>
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*12 engineering excellence principles from the Agile Manifesto
### CMMI V2.0 DIRECTLY ADDRESSES AND IMPROVES AGILE ENGINEERING EXCELLENCE PRINCIPLES* - 2

<table>
<thead>
<tr>
<th>EE Principles 5-8</th>
<th>CMMI V2.0 Solutions</th>
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<tbody>
<tr>
<td>Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done</td>
<td>Extensive list of best practices, activities and work products for Organization Training, Planning, and Implementation Infrastructure and Governance to to ensure the support environment is sustaining habit and persistence</td>
</tr>
<tr>
<td>The most efficient and effective method of conveying information to and within a development team is face-to-face conversation</td>
<td>Techniques and proven practices emphasizing team interaction, Empowered Work Groups, F2F communication and Decision Analysis and Resolution</td>
</tr>
<tr>
<td>Working software is the primary measure of progress</td>
<td>Agile with Scrum and other development techniques Technical Solution, Product Integration best practices, continual Verification and Validation to get working software in front of users</td>
</tr>
<tr>
<td>Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely</td>
<td>Agile methods and techniques and an entire Capability Area around Sustaining Habit and Persistence (SHP) best practices for managing and maintaining progress</td>
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*12 engineering excellence principles from the Agile Manifesto
CMMI V2.0 DIRECTLY ADDRESSES AND IMPROVES AGILE ENGINEERING EXCELLENCE PRINCIPLES* - 3

<table>
<thead>
<tr>
<th>Principles 9-12</th>
<th>CMMI V2.0 Solutions</th>
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<tr>
<td>Continuous attention to technical excellence and good</td>
<td>Entire Capability Area of Engineering and Developing Products and multiple Practice Areas on technical excellence, design and agility</td>
</tr>
<tr>
<td>design enhances agility</td>
<td></td>
</tr>
<tr>
<td>Simplicity—the art of maximizing the amount of work</td>
<td>Bidirectional alignment of requirements to end-user and customer needs to design and provide Minimum Viable Product and customer solutions</td>
</tr>
<tr>
<td>not done—is essential</td>
<td></td>
</tr>
<tr>
<td>The best architectures, requirements, and designs</td>
<td>Team-based, criteria-based, decision-making that drives Requirements Development and Management architecture, Technical Solution for design and Product Integration for integration and interface management</td>
</tr>
<tr>
<td>emerge from self-organizing teams</td>
<td></td>
</tr>
<tr>
<td>At regular intervals, the team reflects on how to</td>
<td>Planning, Monitor and Control, Managing Performance and Measurement, and Process Change Management all driving continual team improvement and learning</td>
</tr>
<tr>
<td>become more effective, then tunes and adjusts its</td>
<td></td>
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<tr>
<td>behavior accordingly</td>
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*12 engineering excellence principles from the Agile Manifesto
HALFAKER: SCALING WITH CMMI AND AGILE PROCESS FOUNDATION

• Headquartered in Arlington, Halfaker and Associates (halfaker.com) is a midsized company that modernizes, integrates, and secures mission critical systems for Federal Government organizations

• Halfaker began to quickly grow in 2013, scaling over 20 projects with 100+ employees – it was challenging to maintain consistent quality during fast growth

• Over the last several years, Halfaker made several process investments to mature and scale:
  – 2014: CMMI-DEV Maturity Level 2 and ISO 9001, to establish enterprise process foundation with a focus on service delivery (project management, customer satisfaction)
  – 2015: Deployed enterprise collaboration tools (SharePoint, Jira)
  – 2015: CMMI-DEV Maturity Level 3 to engineering process foundation
  – 2016: Deployed enterprise Confluence environment (Wiki, KM)
HALFAKER: SCALING WITH CMMI AND AGILE ENGINEERING FOUNDATION

- In 2018, Halfaker created the Enterprise Engineering Management Framework (EEMF), composed of 38 questions assessing various domains of engineering maturity to identify strengths and weaknesses.

- Halfaker conducted monthly engineering maturity reviews for projects so teams could self-assess against EEMF and collaborate with enterprise engineering leaders to identify ways to continuously improve. See the Halfaker Helios system below.

- In Spring 2018, Halfaker opened an Agile Delivery Center (ADC) to create a physical ‘software factory’ to leverage.

<table>
<thead>
<tr>
<th>DIVISION OVERVIEW DASHBOARD</th>
<th>New Assessment</th>
<th>Filter</th>
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<tbody>
<tr>
<td><strong>PORTFOLIO NAME</strong></td>
<td><strong># PROJECTS</strong></td>
<td><strong>ANALYZE</strong></td>
</tr>
<tr>
<td>Defense Division Jane Smith</td>
<td>14</td>
<td>G</td>
</tr>
<tr>
<td>Health Division Marvin Jones</td>
<td>23</td>
<td>G</td>
</tr>
<tr>
<td>Civil Division Alan Gilson</td>
<td>12</td>
<td>Y</td>
</tr>
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THANK YOU!

- Webinar recording will be sent via email
- Additional questions? Submit to info@cmmiinstitute.com