



Cultural Challenges of MBSE Agile Integration

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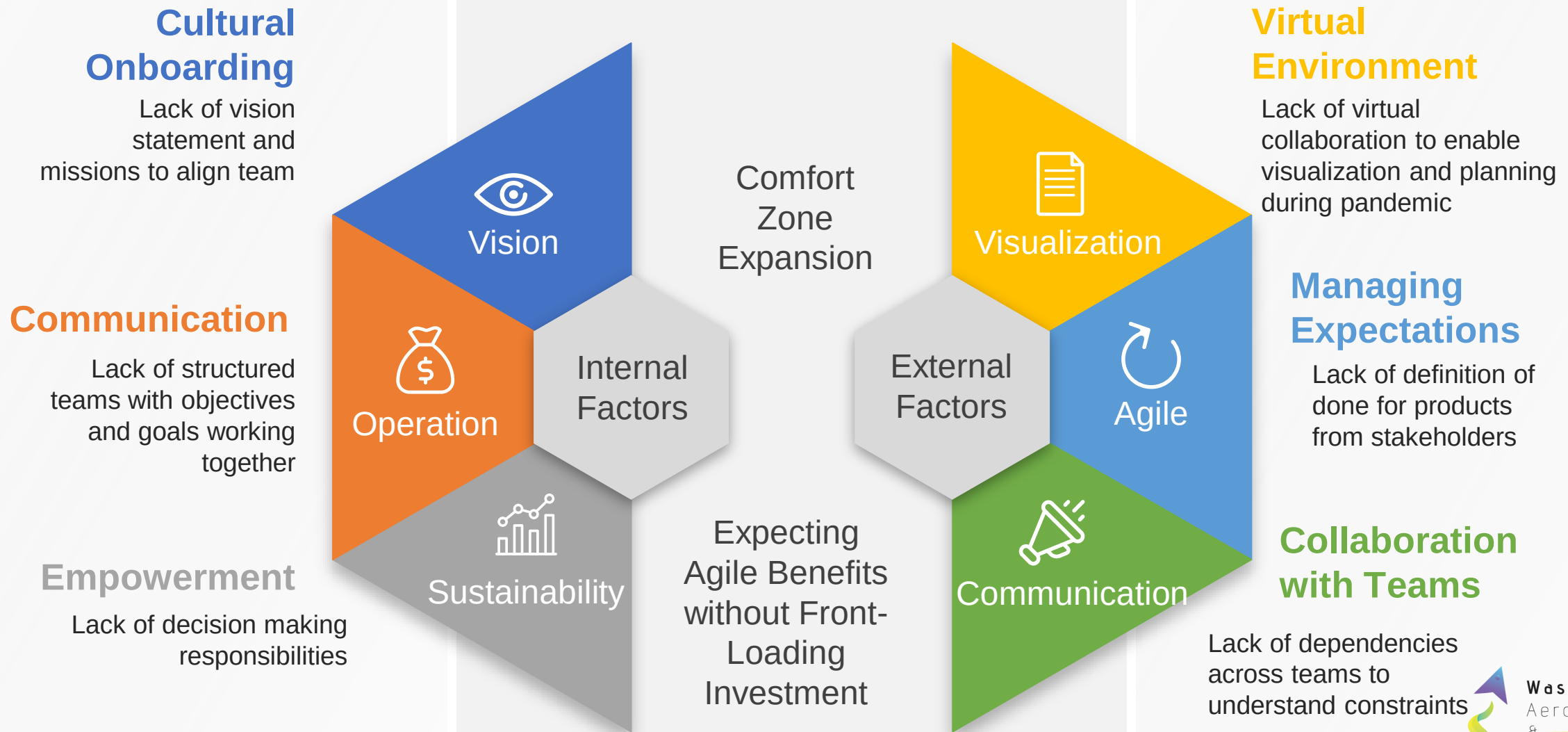
Wasatch Aerospace & Systems Engineering Conference

Agenda

- Cultural Challenges
- Vision for Change
- Infusion of MBSE with Agile
- Engagement with Data
- Retrospective

Cultural Challenges

Internal and External Factors Experienced from Team



Vision for Change

Provide Enablers to Empower Team to Remove Cultural Challenges



Vision



Operation

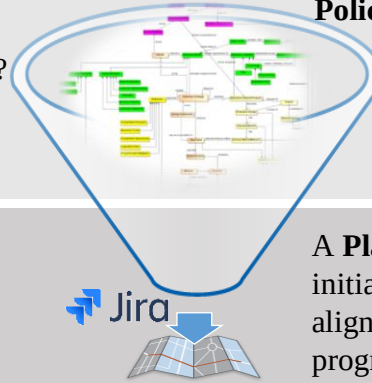
Establish
Motivation Model
within first 30
days



Enabler 1 – Motivation Model

- Why must we drive the need for change?
- What is our current technical debt?
- What are the new ways of working to meet benefits?
- How do our technical and operational requirements need to evolve to align with this vision?

Value Chain, Strategy, Policy, Measures, Process



Enabler 2 – Initiative and Capabilities

- How should we prioritize upcoming program increment based on contract, technical debt, and change requests to maximize value?

A **Plan** is roadmap of all the initiatives the directorate will align to for the next two program increments.

Jira

Enabler 3 – Release Planning

- How should we decompose, prioritize and assign work to deliverables to maximize efficiency and value? How much work can we accomplish, based on team velocity?

A **Epic** is the largest group of related functionality.

Jira

Enabler 4 – Iteration Planning

- What tasks can our team accomplish within the next 3 weeks? How do we need to move resources amongst scrum teams to maximize efficiency? How are epics from various teams grouped into related iterations?

A **Story** is an increment of work to be accomplished within an epic.

Jira

Enabler 5 – Daily Planning

- How are teams progressing?
- Are there any roadblocks?

A **Task** is a smaller work item, required to accomplish a story.

Jira

Dashboards



Visualizations

Real-time metrics collection
and reporting aligned by
Roadmap and Release
enabled through Jira



Jira

Release
Review

Sprint
Review

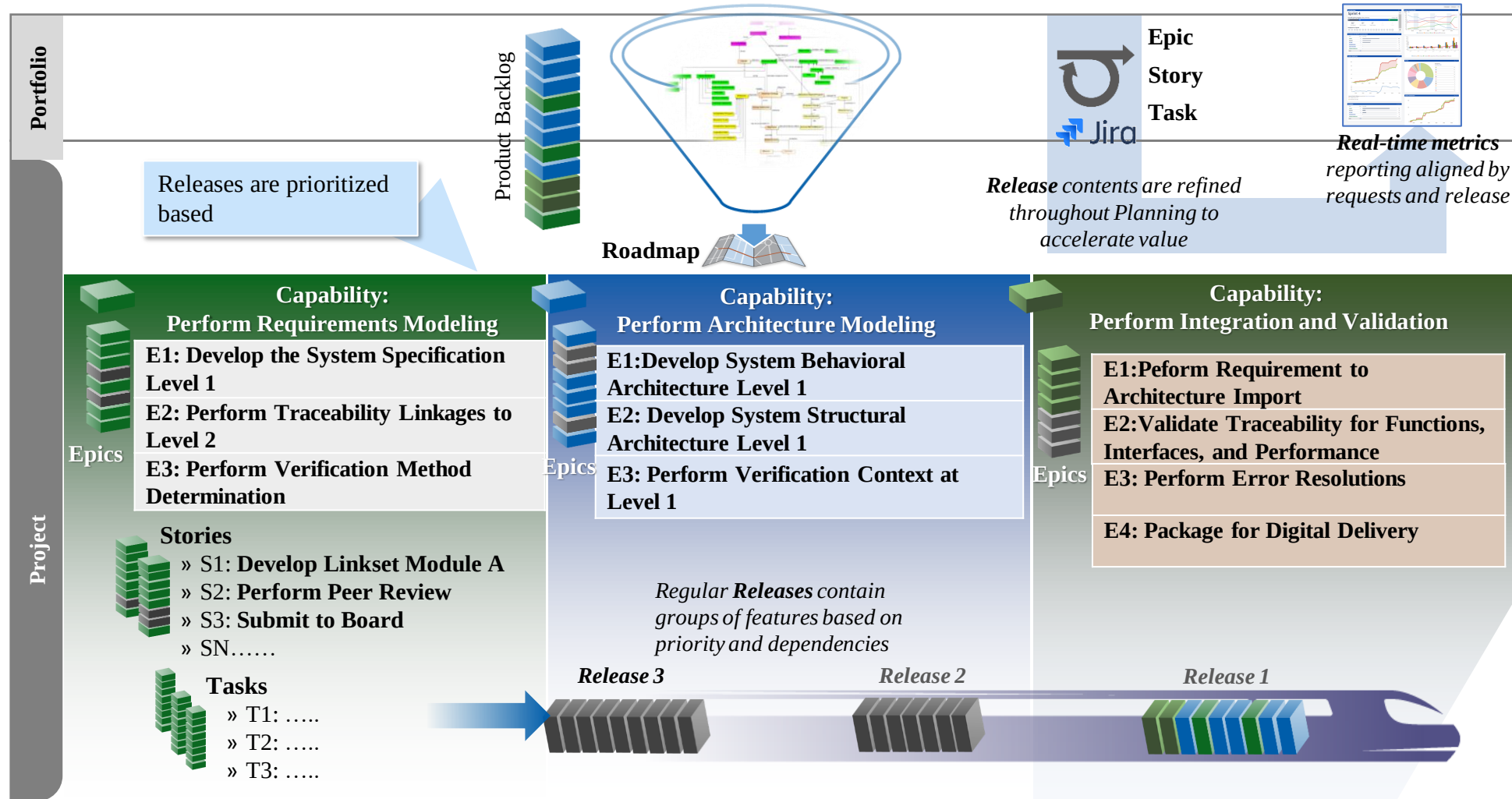
Daily



Agile

Infusion of MBSE with Agile Methods

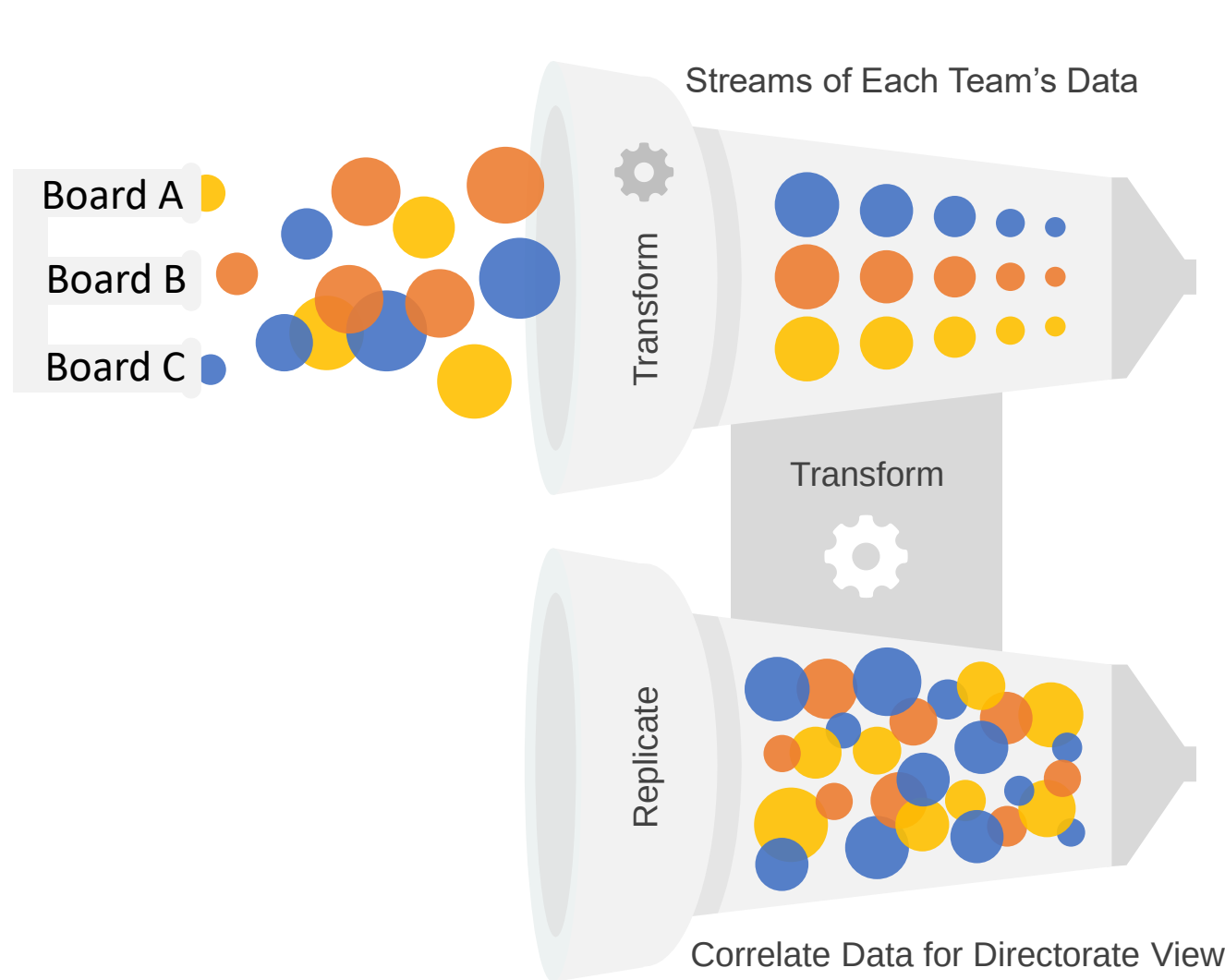
Every Release Provide Value with Integrated Requirements and Architecture Product



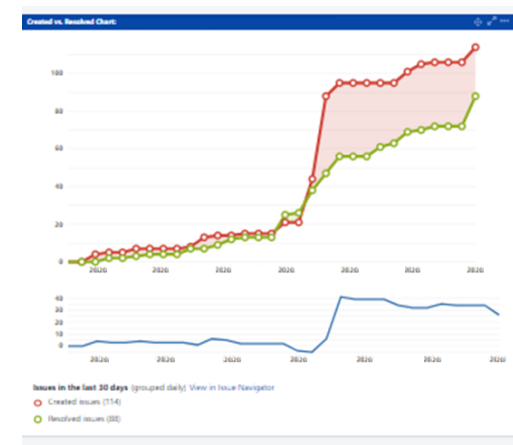
Engagement with Data

Provide Transparency Inward and Outward on Progression

SCRUM
Teams



Jira



Retrospective

What to CONTINUE doing

- Product demonstrations
- Transparency and collaboration on roadblocks
- Hierarchy roll-up of sub-tasks to initiatives for 'big picture'
- Dashboards for sprint and PI health metrics and quick status checks

What to START doing

- Deep Dive sync-ups with stakeholders and Agile team
- Clearer (searchable) alignment to IMS and SOW
- Plans/Gantt view within PI

What to STOP doing

- Placing source of truth in non-digital based application
- Rigid Agenda (rolling agenda)

Abstract

- The cultural challenges when transitioning to a new execution framework with an early-career workforce while in a pandemic brings challenges for any leaders. To engage and enroll a virtual team requires dedication to a vision of empowerment for the team members to own how they organize and determine implementation. We inserted agile methods to how we operate our business together for common shared objectives while providing customer transparency on the successes and roadblocks everyday. We are still uncovering cultural habits learned over decades that need to be mended and formed into new world views collaboratively with other teams who interact with us daily. As the benefits of inherent transparency depict insightful measures for teams and program, the enrollment is more embraced. These insightful measures on dashboards readily accessible by all on the program have opened up engagement and a new culture of possibilities that Agile can bring. We have learned the most effective way to empower a largely early-career workforce is to show examples of dashboards, electronic Scrum or Kanban environments, and collaboration practices. Team members will embrace the possibilities and develop improved solutions. Although transitioning to a new execution framework has presented challenges, the improved transparency and collaboration between stakeholders, developers, and customers is aiding in the shift to new world views.



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