

Lean SCAMPISM

*Jeffrey L. Dutton
Chief Engineer
Jacobs Technology Inc. ITSS*

Applicable Lean Constructs

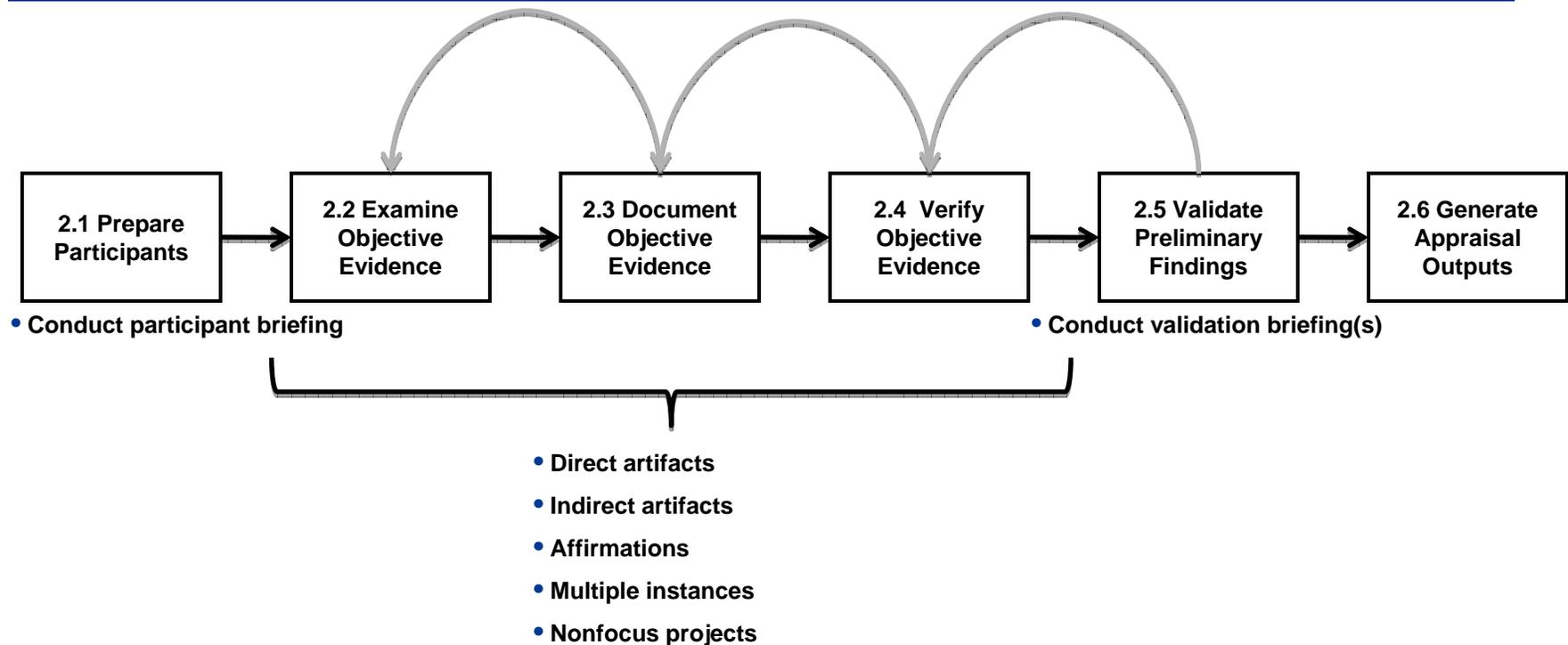
- Value stream mapping
 - Focus on customer value (appraisal sponsor)
 - Waste elimination
 - Wait time
 - Motion
 - Management
 - Partially done work
 - Defects
 - Task switching
 - Anything not of value to the sponsor
 - Takt time/cadence
 - Synchronization
- Kanban decision making
- Poka Yoke (mistake proofing)

What do we mean by “Lean SCAMPI”?

- Perceptions of “fat SCAMPI”
 - Appear focused on “Conduct Appraisal” phase of SCAMPI A MDD
 - Takes “too long”
 - Takes “too many resources”
 - Is “too expensive”
- Lean scoping considerations
 - Restrict to ARC-compliant methods like SCAMPI A?
 - Expand to include the ARC (Appraisal Requirements for CMMI)?
 - Restrict to “Conduct Appraisal’ Phase?
- Lean Thinking requires us to ask these questions:
 - Is the customer clearly identified?
 - Are the end products of maximum value to the customer?
 - Has waste been eliminated?
 - Has “pull” or takt time been established?
 - Have appraisal activities been synchronized within the appraisal cadence?

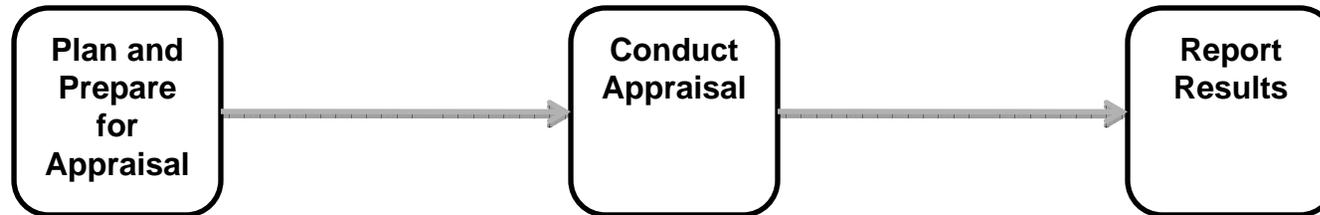
A Workflow View (single appraisal)

Indicates that , in general, an individual SCAMPI process flows correctly



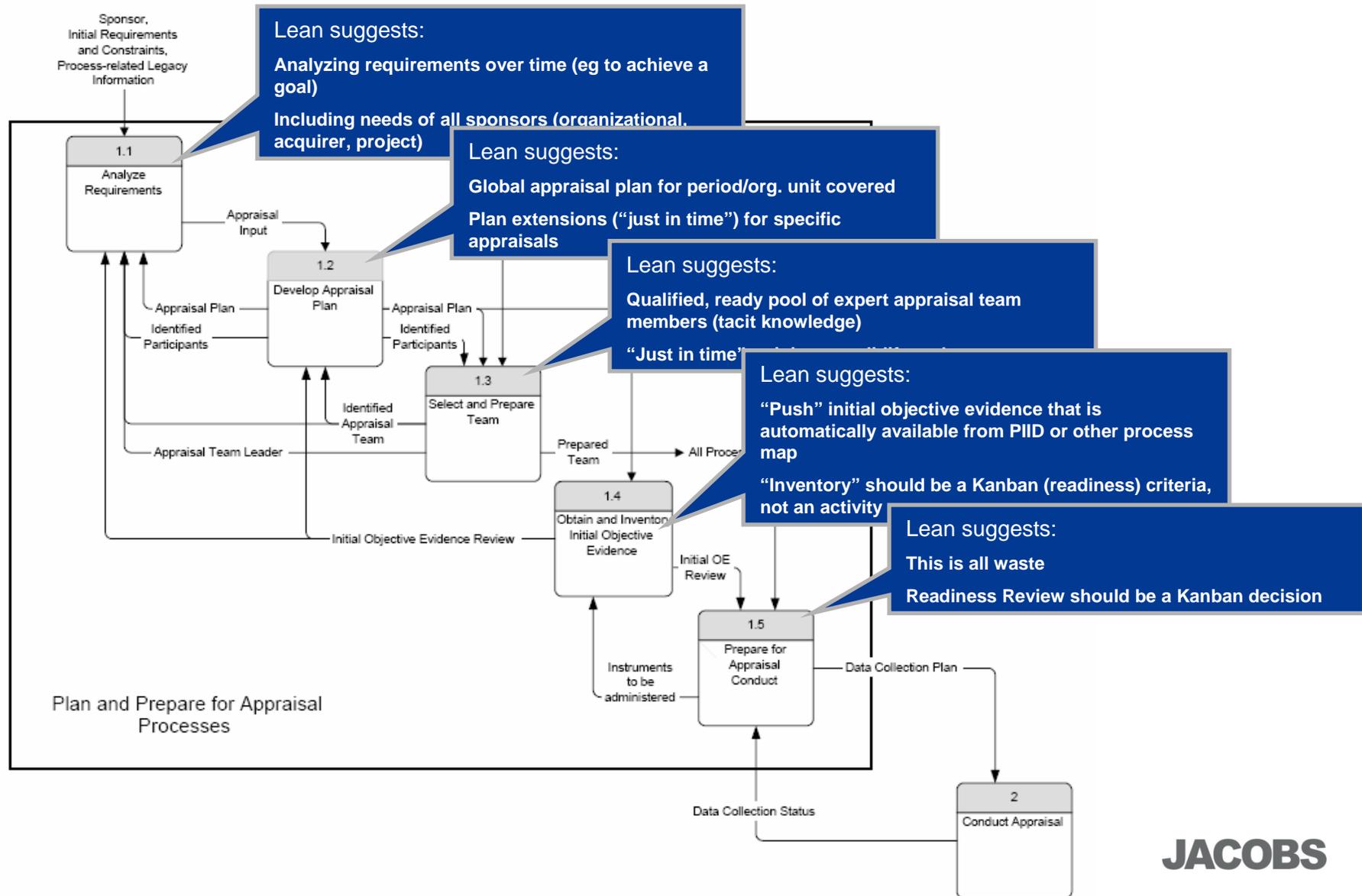
So let's look at waste in this workflow

Top Level SCAMPI Process

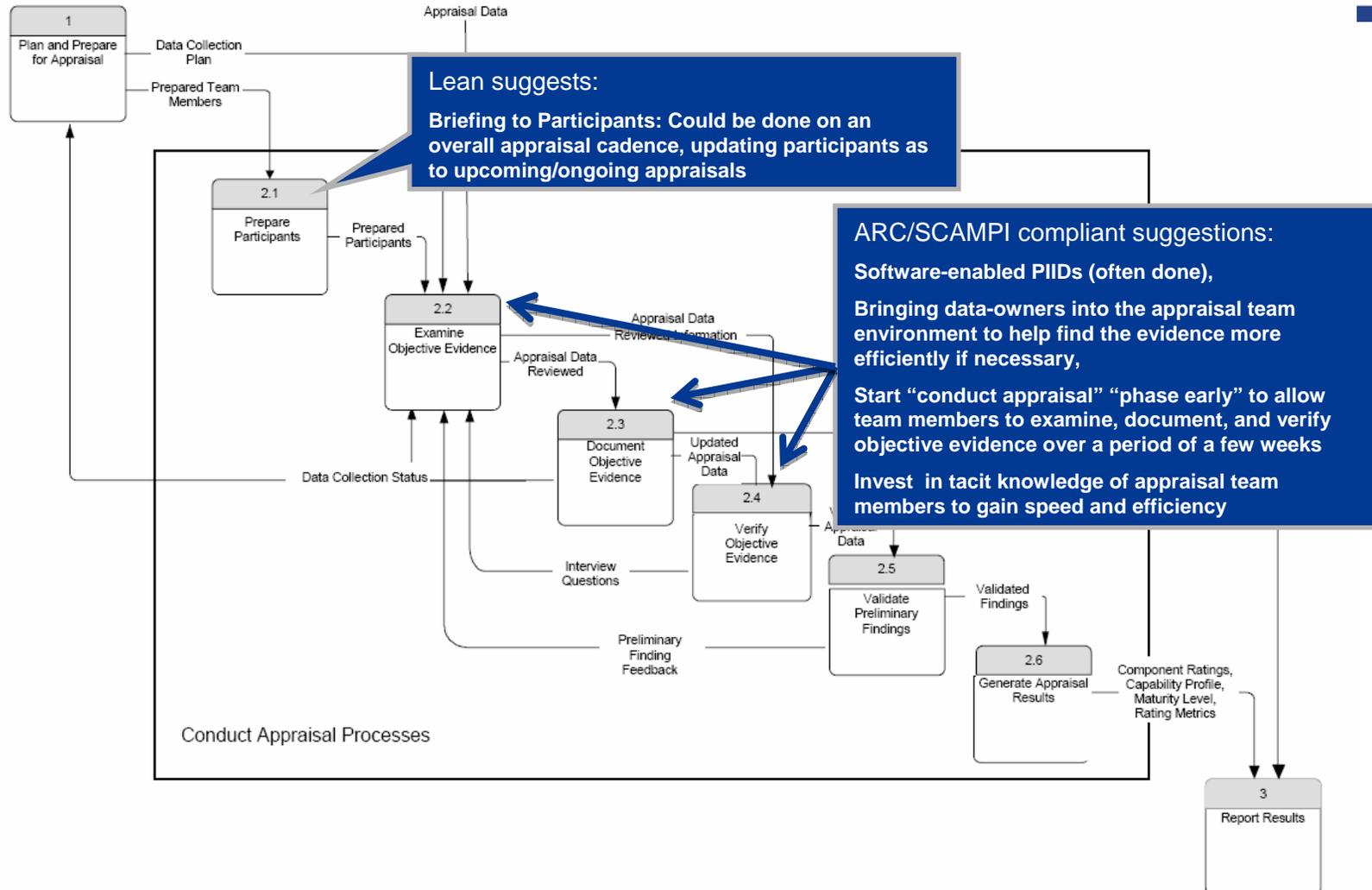


- Application to Project maturation is problematic
 - Project process capability will grow over time to target
 - Multiple appraisals over project life cycle may be needed
- Current state waste:
 - Wait times between Planning and Conduct induces waste due to work product degradation (defect induction)
 - Lack of takt time or cadence induces waste across multiple appraisals.
 - Value to the sponsor is challengeable
 - Is the organizational scope optimal?
 - Is the appraisal output of highest value considering large investment?

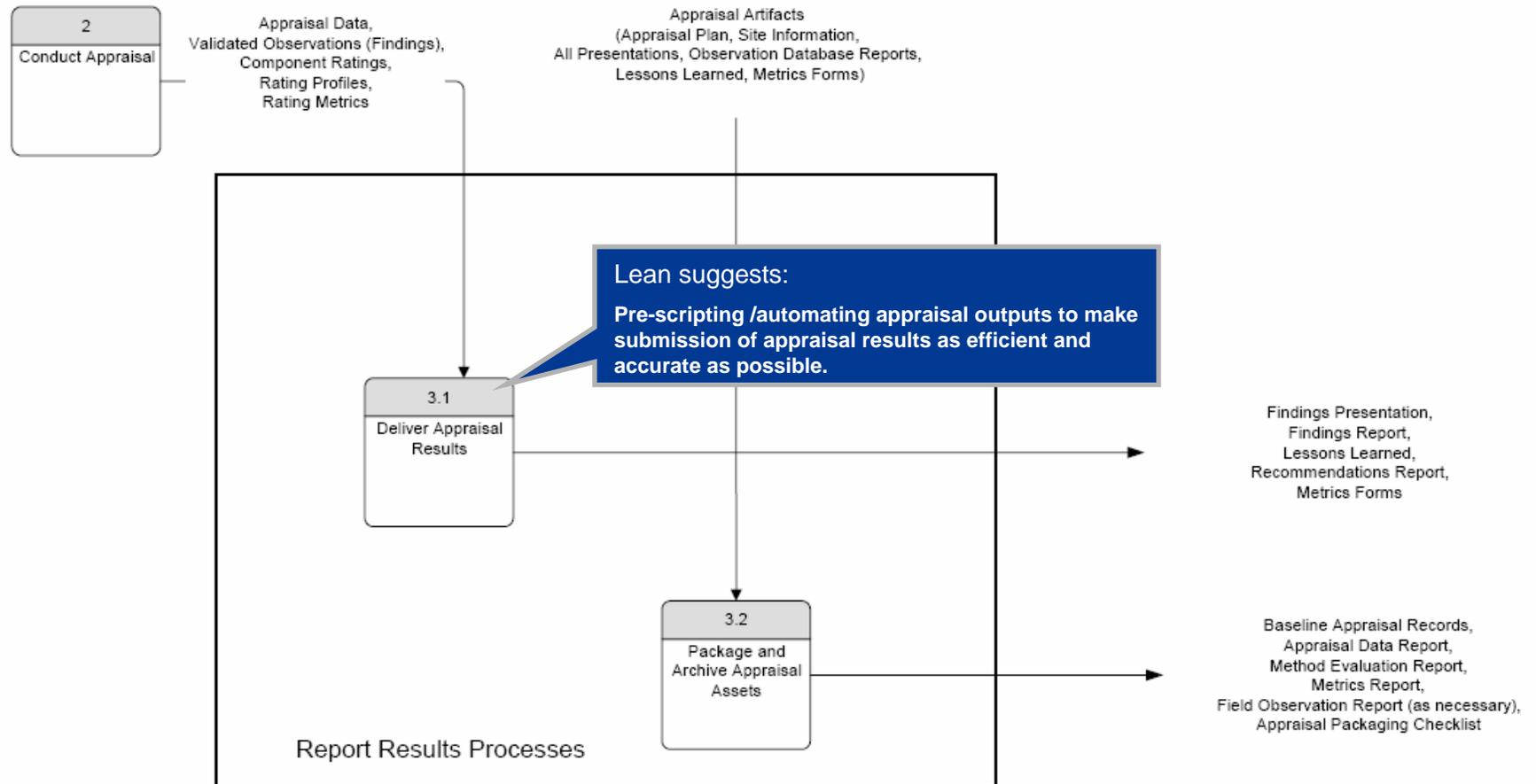
Plan and Prepare for Appraisal



Conduct Appraisal



Report Results



External (Acquirer) Sponsor

- Desires efficient, fast, inexpensive project-level appraisals
 - Responsive to acquirer's program risks
 - Checks compliance with supplier's project process-performance maturation forecast
 - Verifies organization's support of project start-up and maturation
- Approaches:
 - Use Class C appraisals to verify progress on supplier's process-performance maturation curve
 - Use Class B appraisals to verify milestone achievements in supplier's process-performance capability

Internal (Process Improvement) Sponsor

- Statistically sample full instance population for defects in objective evidence
 - All instances = all projects and all organizational offices
 - Several tests of hypothesis available, depending on assumptions about the normality of the underlying population and the sample size
 - Failure to reject null hypothesis would equate to a benchmark assertion with a specified confidence level
 - Advantages:
 - Lower appraisal costs
 - Virtually all instances open to appraisal

My Answers to the Lean Questions

- Is the customer clearly identified?
 - Sponsor of internal process improvement: Fully specified.
 - Sponsor who is an acquirer: Largely specified.
 - Sponsor who is a manager of a single project: Largely unspecified.
- Are the end products of maximum value to the customer?
 - Internal process improvement: questions related to ROI, timeliness, and usefulness for guiding improvements
 - Acquirer: Organizational Maturity Levels or CL profiles do not appear to be of maximum value
 - Project Manager: Appraisal process support of project process-performance appears limited
- Has waste been eliminated?
 - There appear to be multiple opportunities to reduce waste
- Has “pull” or takt time been established?
 - Notion of appraisal cadence in support of sponsor’s goals appears largely unaddressed
- Have appraisal activities been synchronized to the appraisal cadence?
 - Not in formal methods available to the public

Summary

- ARC-Compliant Lean approaches:
 - Strategic approaches to multiple appraisals
 - Strategic plans leave only tactical planning to each appraisal
 - Provided at an expected cadence
 - Taking advantage of expert appraisal team members
 - Synchronizing information flow across the organization
 - Leaning the single appraisal process
 - Planning = minor extension to strategic appraisal plan
 - Kanban decision making where possible
 - Focus on project process-performance
 - Use of project process-performance maturation curve
 - Internal monitoring and verification
 - Acquirer monitoring and verification
- ARC Non-compliant Lean approaches:
 - Statistical sampling and tests of hypotheses to benchmark and estimate process-performance capability

Questions?