OVERVIEW

Our journey:

- Mapping Agile activities to CMMI practices
- Mitigating gaps in process definition and records
- Balancing CMMI documentation and the Agile Manifesto
- The CMMI Value Proposition for Agile teams
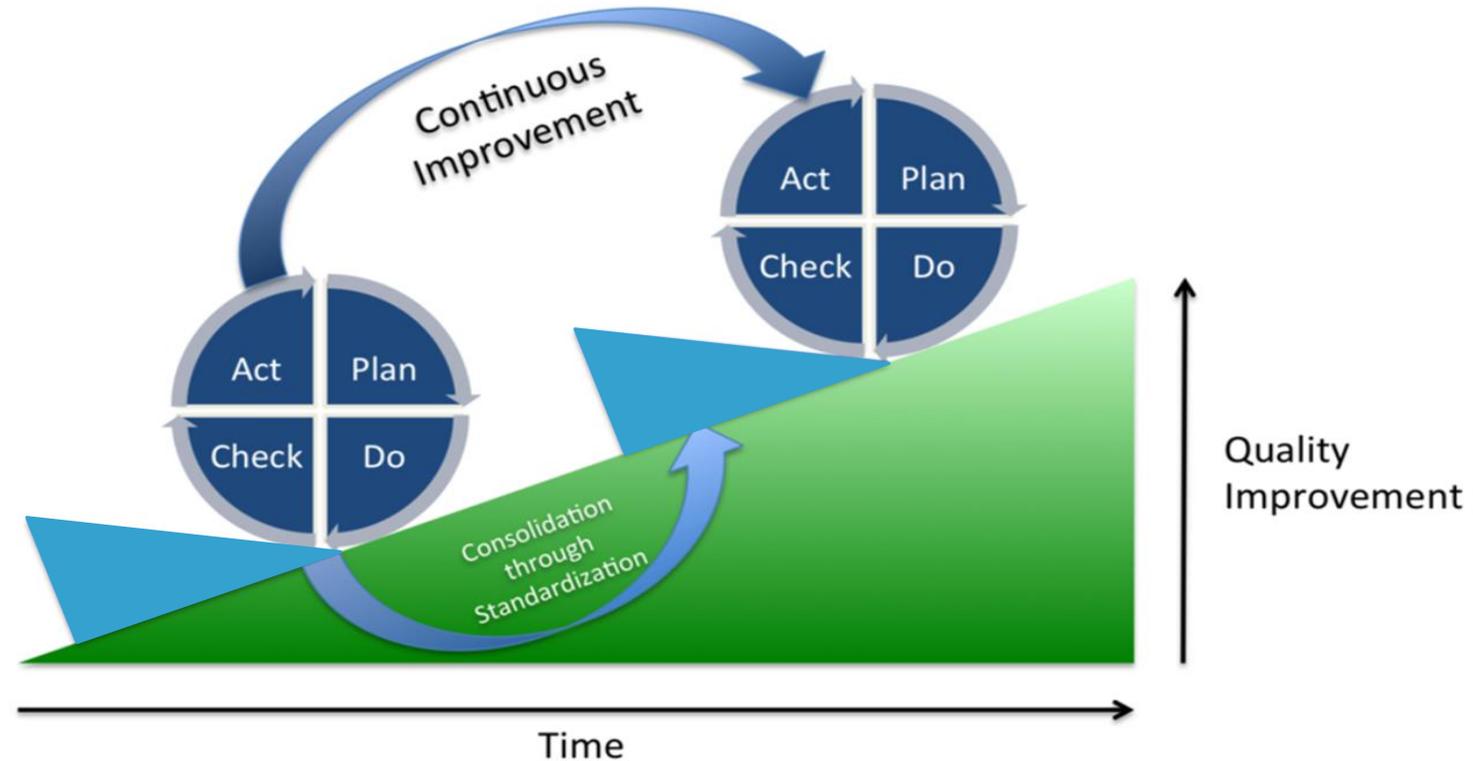
Your approach and results may vary

Value

Balancing

Mitigating

Mapping

CHALLENGES

- Map the Gaps

- Articulate the Value

- Entire Organization as Stakeholder

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PDCA

- Plan – Map Agile to CMMI

- Do – Implement the Process Improvements

- Check – Appraise the Processes

- Act – Lessons Learned: Improve the Process

PLAN: MAPPING THE GAPS - PROCESSES

REVIEWS & INSPECTIONS

- **Project Planning**
  - **Integrated Project Plan**
  - **Project Test Strategy**
  - **Transition to Production**
- **Enterprise Architecture**
  - **Solution Scope**
  - **Integration Design**

AGILE SPRINTS & CEREMONIES

- **Requirements Review**
  - **Backlog Grooming**
  - **Definition of Done**
  - **Sprint Plan**
- **Component Design**
  - **Sprint**
- **Code**
  - **Sprint**

- **Test**
  - **Sprint**
  - **Definition of Done**
  - **Sprint Demo**

PLAN: MAPPING THE GAPS - **RECORDS**

REVIEWS & INSPECTIONS

- **Records of Review and Inspection**

- **Test Results Summary**

AGILE SPRINTS & CEREMONIES

- **Agile Ceremonies**
  - **Sprint Planning Minutes**
  - **Sprint Demo Minutes**

DO: IMPLEMENT THE PROCESS IMPROVEMENTS – ADDRESSING THE GAPS

- Agile Practice Descriptions
  - Inspection/review integrated into daily routine
  - Significance of meeting minutes as a record
- Specific content for meeting minutes
  - Attendee names and roles
  - Stories in Sprint Plan
  - Stories accepted / not accepted in Sprint Demo
  - Names of approvers
- Meeting minutes in Definition of Done

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DO: IMPLEMENT THE PROCESS IMPROVEMENTS –
ARTICULATING THE VALUE

- Training to bridge gaps in understanding
  - Who are the peers in a peer review?
  - How does the Definition of Done establish V&V criteria?

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DO: IMPLEMENT THE PROCESS IMPROVEMENTS –
THE VALUE OF MEETING MINUTES

In general, a business record of Stakeholder commitment

- Sprint Planning Meeting Minutes record…
  - Selected stories are complete and ready for development
  - Approval of the content of the sprint
- Sprint Demo Meeting Minutes record…
  - Stakeholder acceptance
  - That design, code, and testing deliverables meet their requirements
  - The outcome of product integration, validation, and verification activities

DO: IMPLEMENT THE PROCESS IMPROVEMENTS –
THE ORGANIZATION AS STAKEHOLDER

Scrum teams do not operate in a theoretical vacuum, but in the context of an entire organization.

SCRUM TEAMS ARE IMPORTANT TO THE ENTIRE ORGANIZATION BECAUSE…
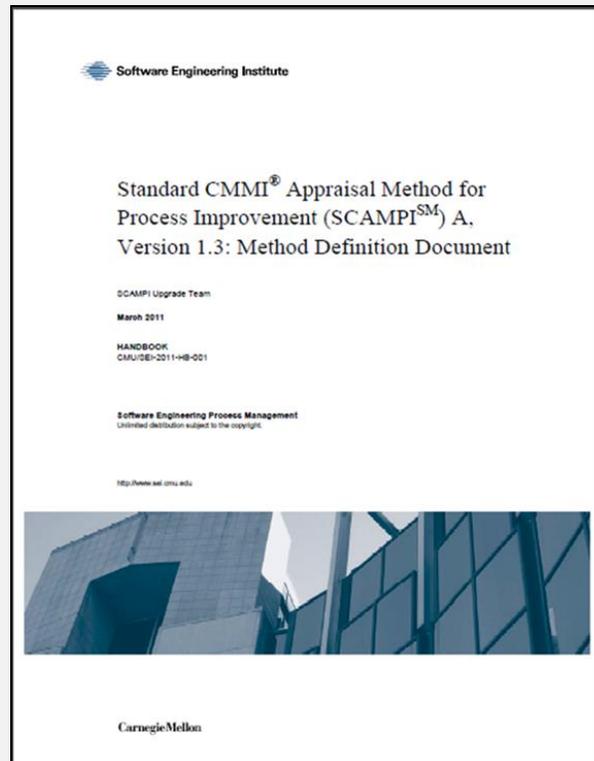
They deliver value…

- To the business

- To the IT development organization…

  - When delivery is consistent with IT policies and practices

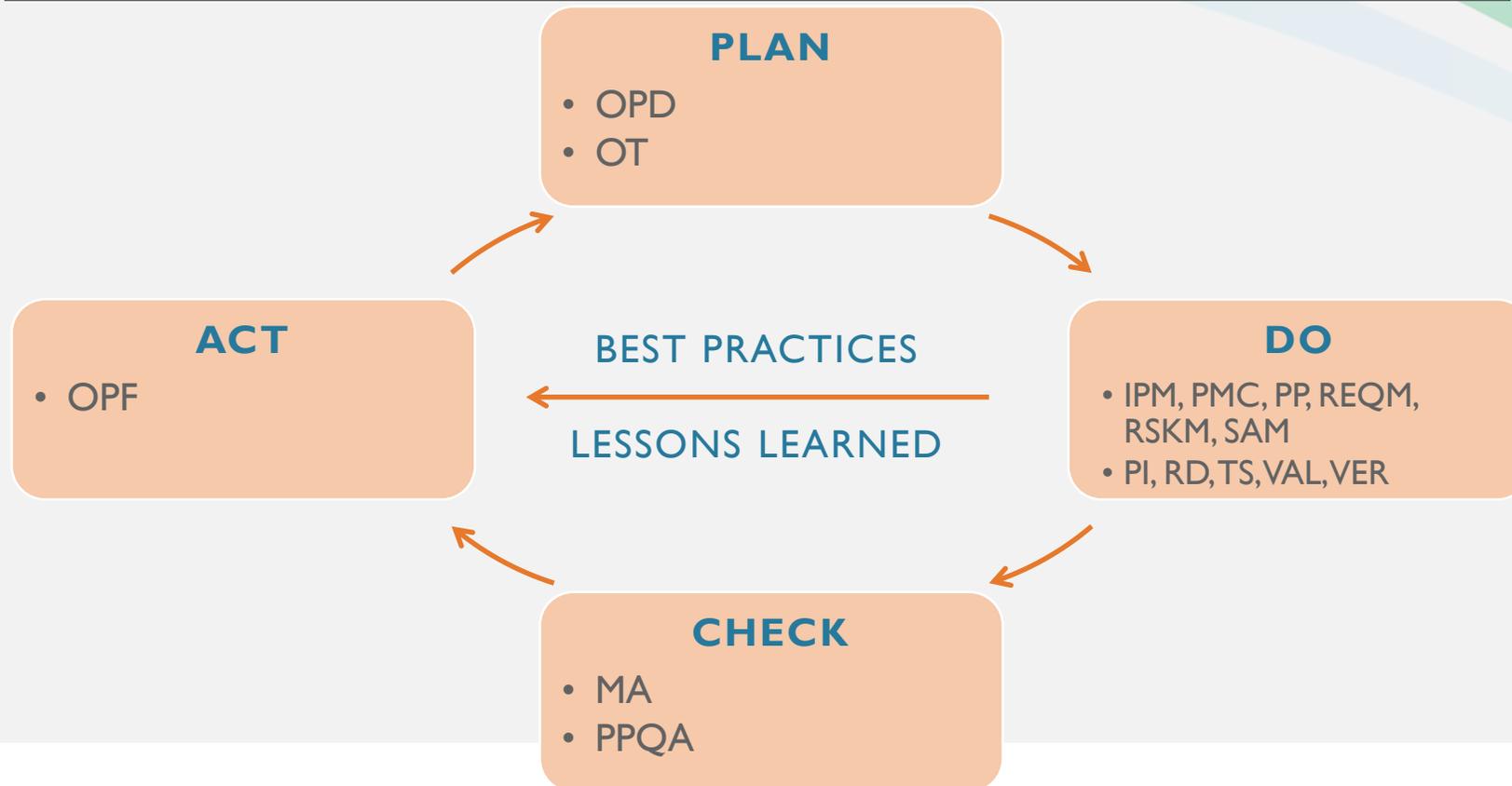**THE ENTIRE ORGANIZATION IS IMPORTANT TO THE SCRUM TEAM BECAUSE…**

The entire organization…

- Is the source of all work

- Establishes HOW the work will be performed

CHECK: APPRAISE THE PROCESSES

ACT: IMPROVE THE PROCESS

PLAN
- OPD
- OT

DO
- IPM, PMC, PP, REQM, RSKM, SAM
- PI, RD, TS, VAL, VER

CHECK
- MA
- PPQA

ACT
- OPF

BEST PRACTICES

LESSONS LEARNED

APPENDIX

VALIDATION ENGINEERING (ML3)

The purpose of Validation (VAL) is to demonstrate that a product or product component fulfills its intended use when placed in its intended environment.

SG 1 Preparation for validation is conducted.

- SP 1.1 Select products and product components to be validated and validation methods to be used.

- SP 1.2 Establish and maintain the environment needed to support validation.

- SP 1.3 Establish and maintain procedures and criteria for validation.

SG 2 The product or product components are validated to ensure they are suitable for use in their intended operating environment.

- SP 2.1 Perform validation on selected products and product components.

- SP 2.2 Analyze results of validation activities.

VERIFICATION ENGINEERING (ML3)

The purpose of Verification (VER) is to ensure that selected work products meet their specified requirements.

SG 1 Preparation for verification is conducted.

- SP 1.1 Select work products to be verified and verification methods to be used.

- SP 1.2 Establish and maintain the environment needed to support verification.

- SP 1.3 Establish and maintain verification procedures and criteria for the selected work products.

SG 2 Peer reviews are performed on selected work products.

- SP 2.1 Prepare for peer reviews of selected work products.

- SP 2.2 Conduct peer reviews of selected work products and identify issues resulting from these reviews.

- SP 2.3 Analyze data about the preparation, conduct, and results of the peer reviews.

SG 3 Selected work products are verified against their specified requirements.

- SP 3.1 Perform verification on selected work products.

- SP 3.2 Analyze results of all verification activities.

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BACKLOG GROOMING

- *Grooming the Product Backlog is an* **inspection process** *that is performed continuously by the Scrum team to verify that user stories (the deliverables) reflect the current business state and are ready for development. The team uses the Definition of Done, which establishes the exit criteria that determine what constitutes potentially shippable software, to verify whether the user stories are complete and ready for selection during the Sprint Planning meeting.*

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SPRINT PLANNING

- *Sprint Planning is a* **review** *by the Scrum team which includes the Product Owner who represents all business stakeholders to the team. They select the user stories (the deliverables) for the sprint only if they meet the Scrum Team Definition of Done. The approval of the content of the sprint confirms that it is complete and accurately reflects the needs of the work effort.* ***This is recorded in the Sprint Planning Meeting Minutes and stored in the project control book.***

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SPRINT DEMO

- *The Sprint Demo **verifies that user stories (the deliverables) meet the requirements** by executing the code. At the end of each Sprint, the working code that was designed, coded, and tested is demonstrated by the Scrum team to the Product Owner and stakeholders. **Approval/acceptance of the Sprint content delivered, as recorded in the Sprint Demo Meeting Minutes (and stored in the project control book), provides direct evidence that the code meets the requirements and also indirect evidence that the intermediate design, code, and testing deliverables meet the requirements. This indirect evidence documented in the Sprint Demo Meeting Minutes satisfies the verification (i.e., inspection and review) of the related deliverables (e.g., design deliverables, test plans, and test scripts).***

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MEETING MINUTES

SPRINT PLANNING

By approving the Sprint Plan, the Scrum team is acknowledging that they have verbally agreed to move forward. Include the following items in the meeting minutes:

- The name and role of those in attendance at this meeting

- Stories included in the Sprint Plan

- The name of those approving the Sprint Plan

SPRINT DEMO

By approving the Sprint Demo, the Scrum team is acknowledging that they have verbally agreed to move forward. Include the following item in the meeting minutes:

- The name and role of those in attendance at this meeting

- Stories accepted as complete and approved

- Stories not accepted as complete

- The name of the Product Owner accepting the stories