

# **An Industry Practice Guide for Agile on Earned Value Management Programs (Version 1.3)**

## **Working Session Example**

# **Course Content & Learning Objective (Painting the Interior of a House)**

- **Agile Planning Overview**
- **Product Planning – Contract Scope to PMB**
- **Increment Planning – PMB Update**
- **Sprint Planning – Inchstone Update**
- **Sprint Review – Assess Performance**

# Agile Planning Example

## Painting the Interior of a House

- **Agile Planning Review**

### Agile Planning Levels Related to EVM Processes

| Planning Level   | Planning Frequency                              | Planning Horizon | Planning Precision    | Planning Artifact   | EVM Processes   |
|------------------|---|------------------|-----------------------|---|---|
| Product Planning | Project startup; updates throughout the project | Project Duration | Capabilities Releases | Product Backlog; Prod Roadmap, Minimal Viable Product (MVP) | IMP planning of Epics/ Capabilities to Releases (Cadency and Capability).   |
| Release Planning | Each Cadence Release                            | Cadence Release  | Feature /Stories      | Product Backlog Updates Release Plan                        | IMS planning of Features to Work & Planning Packages. Networking them to Capabilities and Releases.                         |
| Sprint Planning  | Each sprint                                     | Weeks            | Stories/Tasks         | Sprint Backlog  | Defining measure of effort and duration for Work and Planning Packages based on Release Sprint Story alignment to Features. |
| Daily Planning   | Daily   | Day              | Tasks                 | Updated Sprint Backlog                                      | Update story status in order to determine EV for each Work Package  |

# Agile Planning Example

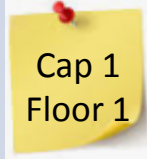
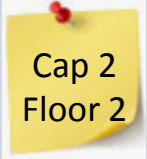
## Painting the Interior of a House

- **Product Planning – Capability Definition**
  - SOW
    - Paint the interior of a two-story residential home
    - Include walls, ceilings, moldings, closets, baseboards
    - Two coats of paint except moldings get one coat
  - Scope (Capabilities)
    - Capability 1: First Floor (1,750 sq. ft.)
    - Capability 2: Second Floor (1,500 sq. ft)
  - Schedule
    - Project Duration: one month
    - Increment Duration: 2 weeks
      - Capability 1: 2 weeks (Increment #1)
      - Capability 2: 2 weeks (Increment #2)
    - Sprint duration: 1 week
  - Budget
    - based on square footage and historical cost per square foot (\$2)
    - Capability 1: \$3500
    - Capability 2: \$3000

# Agile Planning Example

## Painting the Interior of a House

- Product Planning – Roadmap, IMS, PMB

| Increment 1  | Increment 2  | Increment 3 | Increment 4 |
|--|--|-------------|-------------|
|  <p>Cap 1<br/>Floor 1</p> |  <p>Cap 2<br/>Floor 2</p> |             |             |

### Product Planning - IMS/PMB

| IMS Task                          | EV Level | Agile Hierarchy | Start  | Finish | Budget  |
|-----------------------------------|----------|-----------------|--------|--------|---------|
| Capability 1 - Paint First Floor  | CA       | Capability      | Day 1  | Day 12 | \$3,500 |
| Capability 2 - Paint Second Floor | CA       | Capability      | Day 15 | Day 26 | \$3,000 |

# Agile Planning Example

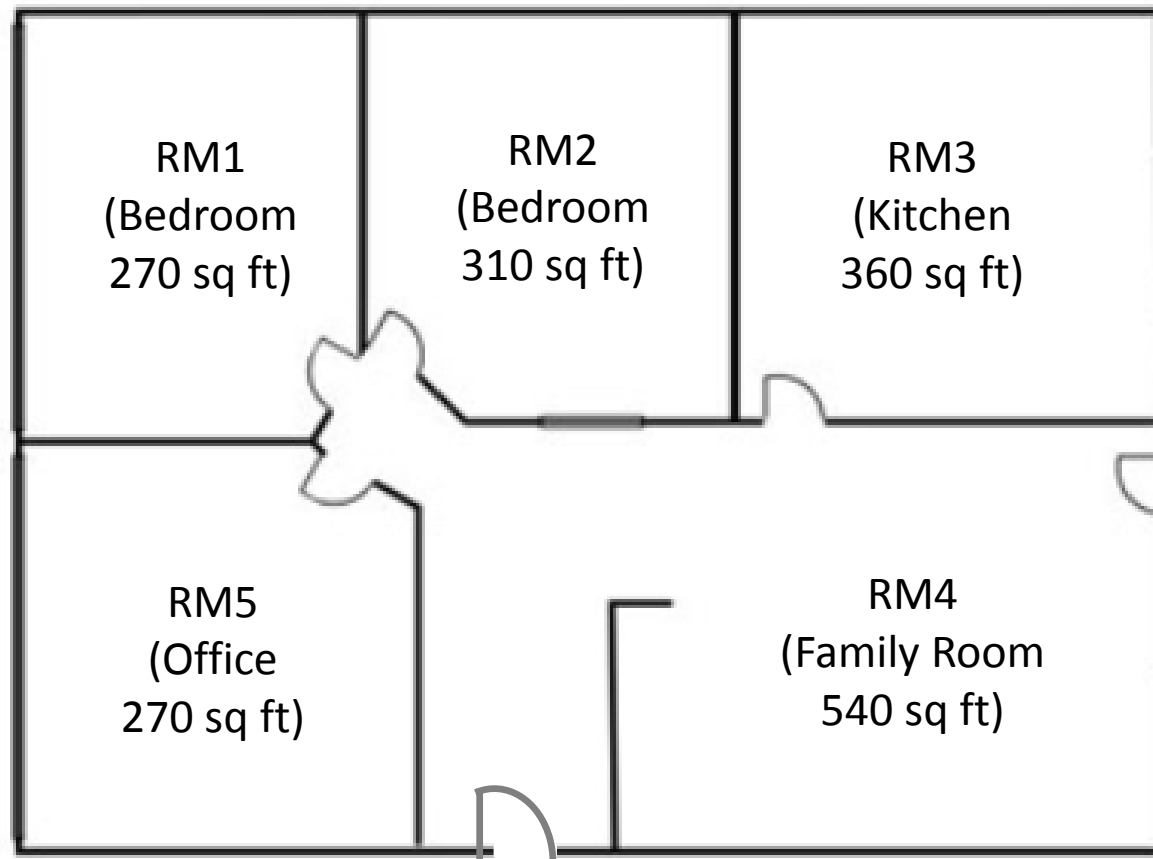
## Painting the Interior of a House

- **Increment Planning – Feature Definition**
  - Decompose Capability 1 (First Floor) into smaller units of work called Features for Increment #1.
  - Each Feature corresponds to a room on the first floor
  - Features:
    - Room #1 = bedroom, light blue walls, white ceiling
    - Room #2 = bedroom light gray walls, white ceiling
    - Room #3 = kitchen light yellow walls, dark yellow molding at ceiling, white ceiling
    - Room #4 = family room maroon walls below chair rail, off white walls above chair rail, built in shelving, white ceiling
    - Room #5 = office light tan walls, white ceiling
  - Feature size:
    - assign room #1 a complexity of 5
    - Determine complexity of other first floor rooms based on room characteristics (class discussion)

# Agile Planning Example

## Painting the Interior of a House

- **Increment Planning – Feature Definition (cont.)**



# Agile Planning Example

## Painting the Interior of a House

- **Increment Planning – Product Backlog**

| Increment 1          | Increment 2 | Increment 3 | Increment 4 |
|----------------------|-------------|-------------|-------------|
| <br><br><br><br><br> |             |             |             |



# Agile Planning Example

## Painting the Interior of a House



- **Increment Planning Features Size and Budgets**
  - Distribute Floor 1 budget based on room complexity
  - Total floor 1 budget = \$3,500
  - Team's historical Velocity is 50 story points
  - Initial Plan – exceeds teams historical Velocity

| Increment Planning - Initial |              |            |         |   |
|------------------------------|--------------|------------|---------|---|
| Scope                        | PBI          | Complexity | Budget  | Acceptance Criteria   |
| First Floor                  | Capability   |            | \$3,500 |   |
| Room #1                      | Feature      | 5          | \$246   | light blue walls, white ceiling   |
| Room #2                      | Feature      | 8          | \$394   | light gray walls, white ceiling   |
| Room #3                      | Feature      | 13         | \$641   | light yellow walls, dark yellow molding at ceiling, white ceiling   |
| Room #4                      | Feature      | 40         | \$1,972 | family room maroon walls below chair rail, off white walls above chair rail, built in shelving, white ceiling |
| Room #5                      | Feature      | 5          | \$246   | office light tan walls, white ceiling   |
|                              | <b>Total</b> | <b>71</b>  |         |   |

# Agile Planning Example

## Painting the Interior of a House



- **Increment Planning Features Size and Budgets (cont)**
  - Updated Plan – aligns with team capacity; split Room #4 scope and budget

| Increment Planning - Final |              |            |         |   |
|----------------------------|--------------|------------|---------|---|
| Scope                      | PBI          | Complexity | Budget  | Acceptance Criteria   |
| First Floor                | Capability   |            | \$2,493 |   |
| Room #1                    | Feature      | 5          | \$240   | light blue walls, white ceiling   |
| Room #2                    | Feature      | 8          | \$384   | light gray walls, white ceiling   |
| Room #3                    | Feature      | 13         | \$623   | light yellow walls, dark yellow molding at ceiling, white ceiling           |
| Room #4a                   | Feature      | 21         | \$1,007 | family room maroon walls below chair rail, off white walls above chair rail |
| Room #5                    | Feature      | 5          | \$240   | office light tan walls, white ceiling                                       |
|                            | <b>Total</b> | <b>52</b>  |         |   |

| Capability 1 - Future |         |            |         |  |
|-----------------------|---------|------------|---------|--|
| Scope                 | PBI     | Complexity | Budget  | Acceptance Criteria                                |
| Room #4b              | Feature | 21         | \$1,007 | family room white built in shelving, white ceiling |

# Agile Planning Example

## Painting the Interior of a House

- **Increment Planning – Product Backlog**

| Increment 1          | Increment 2              | Increment 3 | Increment 4 |
|----------------------|--------------------------|-------------|-------------|
| <br><br><br><br><br> | <br><br><br><br><br><br> |             |             |

# Agile Planning Example

## Painting the Interior of a House

- **Rolling Wave Planning – Assign Features to WP**
  - Work Package Baseline: Scope, Budget, Schedule
- **Updated IMS:**

**Increment Plan / Rolling Wave**

| IMS Task                                 | EV Level  | Agile Hierarchy   | WP ID   | Start         | Finish        | Budget         |
|--|-----------|-------------------|---------|---------------|---------------|----------------|
| <b>Capability 1 - Paint First Floor</b>  | <b>CA</b> | <b>Capability</b> |         | <b>Day 1</b>  | <b>Day 5</b>  | <b>\$3,500</b> |
| Paint Room #1                            | WP        | Feature           | WP-RM1  | Day 1         | Day 5         | \$240          |
| Paint Room #2                            | WP        | Feature           | WP-RM2  | Day 1         | Day 5         | \$384          |
| Paint Room #3                            | WP        | Feature           | WP-RM3  | Day 1         | Day 5         | \$623          |
| Paint Room #4 - walls                    | WP        | Feature           | WP-RM4a | Day 8         | Day 12        | \$1,007        |
| Paint Room #5                            | WP        | Feature           | WP-RM5  | Day 8         | Day 12        | \$240          |
| Paint Room #4 - shelving & ceiling       | PP        | Feature           | WP-RM4b | Day 15        | Day 26        | \$1,007        |
| <b>Capability 2 - Paint Second Floor</b> | <b>CA</b> | <b>CA</b>         |         | <b>Day 15</b> | <b>Day 26</b> | <b>\$3,000</b> |

# Agile Planning Example

## Painting the Interior of a House

- **Sprint Planning – Define Stories for Features**
  - Example: *Room #4 – Walls* Feature

| WP/Feature - Room #4 - Walls                      |            |
|---|------------|
| Story   | Complexity |
| Scrape  | 2          |
| Prime   | 3          |
| First Coat - below chair railing & chair railing  | 5          |
| First Coat - above chair railing                  | 3          |
| Second Coat - below chair railing & chair railing | 5          |
| Second Coat - above chair railing                 | 3          |
|   | <b>21</b>  |

# Agile Planning Example

## Painting the Interior of a House

- Assess Earned Value Performance

| WP/Feature - Room #4 - Walls                      |            |             |            |
|---|------------|-------------|------------|
| Story   | Complexity | Status      | Earned     |
| Scrape  | 2          | Complete    | 2          |
| Prime   | 3          | Complete    | 3          |
| First Coat - below chair railing & chair railing  | 5          | Complete    | 5          |
| First Coat - above chair railing                  | 3          | Complete    | 3          |
| Second Coat - below chair railing & chair railing | 5          | Started     | 0          |
| Second Coat - above chair railing                 | 3          | Not Started | 0          |
|   | <b>21</b>  |             | <b>13</b>  |
|   |            |             | <b>62%</b> |

| Earned Value |     |       |
|--------------|-----|-------|
| Budget       | %C  | BCWP  |
| \$1,007      | 62% | \$623 |

- Change scenario

- customer agrees to one coat of paint above chair railing

| WP/Feature - Room #4 - Walls                      |            |             |            |
|---|------------|-------------|------------|
| Story   | Complexity | Status      | Earned     |
| Scrape  | 2          | Complete    | 2          |
| Prime   | 3          | Complete    | 3          |
| First Coat - below chair railing & chair railing  | 5          | Complete    | 5          |
| First Coat - above chair railing                  | 3          | Complete    | 3          |
| Second Coat - below chair railing & chair railing | 5          | Started     | 0          |
| Second Coat - above chair railing                 | 0          | Not Started | 0          |
|   | <b>18</b>  |             | <b>13</b>  |
|   |            |             | <b>72%</b> |

- No change in scope, only implementation detail
- May result in favorable cost and schedule variance