

# **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

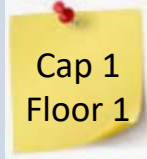
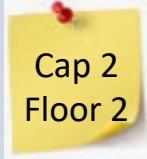
## Painting the Interior of a House

- **Product Planning – Capability Definition**
  - SOO
    - 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 Floor 1</p>	 <p>Cap 2 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

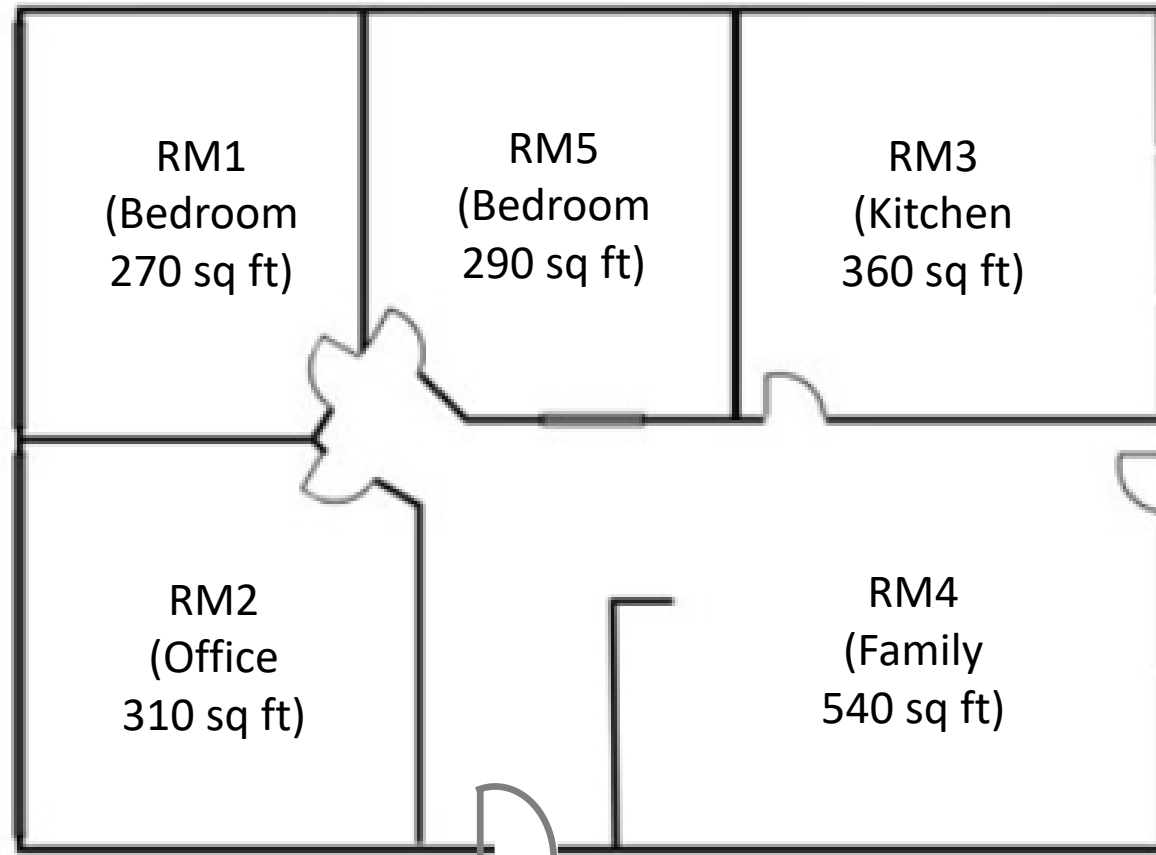
- **Increment Planning – Feature Definition**
  - Decompose Capability 1 (First Floor) into smaller units of work called Features for Increment #1.
  - Each Feature corresponds to a room on the first floor
  - Features:
    - Room #1 = bedroom, light blue walls, white ceiling
    - Room #2 = office, light tan 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 = bedroom, light gray 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.)**

Capability:  
First Floor



# Agile Planning Example

## Painting the Interior of a House

- **Increment Planning – Product Backlog**

Increment 1	Increment 2	Increment 3	Increment 4



# 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	bedroom, light blue walls, white ceiling
Room #2	Feature	8	\$394	office, light tan walls, white ceiling
Room #3	Feature	13	\$641	kitchen, 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	bedroom, light gray 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	office light tan 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	light gray 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



- **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