Effective Project Management

Wysocki – Models, Chapters 9,10,11,12

**Project Management Life Cycle Models (PMLC Models)**

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| Project Types: Traditional Project Models (TPM)Agile Project Models (APM)Extreme Project Models (xPM) | PMLC Models: TPM consists of Linear, IncrementalAPM consists of Iterative, AdaptivexPM consists of Extreme, Emertxe |

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|  | Linear: | Scope | 🡪 | Plan | 🡪 | Launch | 🡪 | Monitor & Control | 🡪 | Close |  |
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Definitions of PMLC Models

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| TPM: Traditional Project ManagementAPM: Agile Project ManagementxPM: Extreme Project Management |
| Overview

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|  | ***Goal*** | ***Solution*** | ***PMLC*** | ***PMLC Models*** |  |
|  | Clear | Clear | TPM | Linear & Incremental |  |
|  | Clear | Not Clear | APM | Iterative & Adaptive |  |
|  | Not Clear | Not Clear | xPM | Extreme |  |
|  | Not Clear | Clear | MPx | Emertze |  |
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**TPM: Traditional Project Management (Linear & Incremental)**

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|  | Clear |  | Clear |  |  |  |
|  | --Goal-- |  | --------------Solution-------------- |  |  |  |
|  |  |  |  |  |  |  |
|  | Scope |  | Plan |  | Launch |  | Monitor |  | Close |  |
|  |  |  |  |  |  |  | & Control |  |  |  |
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**APM: Agile Project Management (Iterative & Adaptive)**

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|  | Clear |  | Not Clear |  |  |  |
|  | --Goal-- |  | -------------------Solution------------------- |  |  |  |
|  |  |  |  |  |  |  |
|  | Scope |  | Plan |  | Launch |  | Monitor |  | Close |  | Close |  |
|  |  |  |  |  |  |  | & Control |  |  |  | Project |  |
|  |  |  |  |  | Iterations or Cycles |  |  |  |  |  |
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**xPM: Extreme Project Management (Extreme & Emertxe)**

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|  | Not Clear |  | Not Clear |  |  |  |
|  | --Goal-- |  | -------------------Solution------------------- |  |  |  |
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|  | Scope |  | Plan |  | Launch |  | Monitor |  | Close |  | Close |  |
|  |  |  |  |  |  |  | & Control |  |  |  | Project |  |
|  |  |  | Phases |  |  |  |  |  |
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**Traditional Project Management**

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| TPM: Traditional Project ManagementLinearStandard Waterfall ModelRapid Development Waterfall ModelIncremental |
| **TPM: Traditional Project Management (Linear & Incremental)**

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|  | Clear |  | Clear |  |  |  |
|  | --Goal-- |  | --------------Solution-------------- |  |  |  |
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|  | Scope |  | Plan |  | Launch |  | Monitor |  | Close |  |
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**Linear PMLC (Standard Waterfall Model)**

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|  | Scope |  | Plan |  | Launch |  | Monitor |  | Close |  |
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**Linear PMLC (Rapid Development Waterfall Model)**

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|  |  |  |  |  |  |  |  |  | (*Swim Lanes*) |  |  |  |  |  |
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|  | Scope |  | Plan |  | Launch |  |  |  | Monitor |  |  |  | Close |  |
|  |  |  |  |  |  |  |  |  | & Control |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  | Monitor |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  | & Control |  |  |  |  |  |
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| Swim Lanes defined by Functions or Features.Maximum cohesion within Swim Lanes.Minimum coupling between Swim Lanes. |

**Incremental PMLC**

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|  |  |  |  |  |  |  |  | (*Increments)* |  |  |  |  |  |  |
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|  | Scope |  | Plan |  |  | Launch |  | Monitor |  | Close |  |  |  |  |
|  |  |  |  |  |  |  |  | & Control |  |  |  |  |  |  |
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|  |  |  |  |  |  | Launch |  | Monitor |  | Close |  |  | Close |  |
|  |  |  |  |  |  |  |  | & Control |  |  |  |  | Project |  |
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| Staged Delivery Waterfall Model |

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**Agile Project Management**

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| APM: Agile Project ManagementIterativeAdaptive |

**APM: Agile Project Management (Iterative & Adaptive)**

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|  | Clear |  | Not Clear |  |  |  |
|  | --Goal-- |  | -------------------Solution------------------- |  |  |  |
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|  | Scope |  | Plan |  | Launch |  | Monitor |  | Close |  | Close |  |
|  |  |  |  |  |  |  | & Control |  |  |  | Project |  |
|  |  |  |  |  | Iterations or Cycles |  |  |  |  |  |
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| **Iterative**Iterative (Iterations): Goal Clear & Solution **partially** defined 🡪 Minimalist agile projects.Models: Prototyping, Evolutionary Development Waterfall, Rational Unified Process (RUP), Dynamic Systems Development Model (DSDM), Adaptive Software Development (ASD), Scrum.

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| Characterized by ‘Iterations’, more is known about the solution but enhancements will need to be made. Often iterations have a focus on improving minor aspects of the solution with the general solution intact. Cancellation of an iteration is not common but a re-direction within a solution or additions to solution results are appropriate. |

**Adaptive**Adaptive (Cycles): Goal Clear & Solution **poorly** defined 🡪 Maximalist agile projects.Model: Adaptive Project Framework (APF)

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| Characterized by ‘Cycles’, less is known about the solution and discoveries about the solution will need to be made. Often cycles have an emphasis on changing the solution process as well as aspects of the solution. Cancellation after a cycle is not uncommon to enable a restart. |

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**Extreme Project Management**

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| xPM: Extreme Project ManagementExtremeEmertxe |

**xPM: Extreme Project Management (Extreme & Emertxe)**

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|  | Not Clear |  | Not Clear |  |  |  |
|  | --Goal-- |  | -------------------Solution------------------- |  |  |  |
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|  | Scope |  | Plan |  | Launch |  | Monitor |  | Close |  | Close |  |
|  |  |  |  |  |  |  | & Control |  |  |  | Project |  |
|  |  |  | Phases |  |  |  |  |  |
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| **Extreme**: Each phase searches for a solution to a goal with adequate business value.**Emertxe**: Each phase searches for a goal that can be achieved by a solution with adequate business value.. |

**Extreme PMLC (Project Management Life Cycle) Models**

INSPIRE (Initiate, Speculate, Incubate, Review)

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|  | Initiate | Initiate. “I’ll know it when I see it”Explore ideas, teams, approaches, and create charters.Generate Multiple Project Overview Statements 🡪 POS |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | Speculate | Speculate “I wonder if this would work?”Investigate feasibility of ideas, resources (COS:Conditions of Satisfaction), and constraints. Produce a list of rejected and accepted POS for launching |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | Incubate | Incubate. “Let’s do it”Assign resources, establish a plan, and produce deliverables.Maintain collaboration, flexibility, & creativity. |  |
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|  |  |  |  |  |  |  |  |  |  |  |  | Review | Review. “Where are we?”Evaluate each phase, results from phases as a group, and the status of the project.Make decisions to proceed with more phases or close project. |  |
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|  | Not Clear |  | Not Clear |  |  |  |
|  | --Goal-- |  | -------------------Solution------------------- |  |  |  |
|  |  |  |  |  |  |  |
|  | Scope |  | Plan |  | Launch |  | Monitor |  | Close |  | Close |  |
|  |  |  |  |  |  |  | & Control |  |  |  | Project |  |
|  |  |  | Phases |  |  |  |  |  |
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| **Extreme**: Each phase searches for a solution to a goal with adequate business value.>Since goal is not set, scope triangle remains flexible.>As project progresses, definitions of goal and solutions from phases become clearer.>As goal and solution definitions become clearer, phases become longer.>Review: When portions of an Extreme project can be spun off to an Agile project or a Traditional project.. |

**Comparisons**

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|  |  |  |  |  |  |
|  | Category | TPM | APM | xPM |  |
|  | Nature | Fixed Methodology | Change Management | Flexible Culture |  |
|  | Characteristic | Compliance | Coordination | Creativity |  |
|  | Change Process | Change Conforms to Plan | Change is Managed in Plan | Change is the Plan |  |
|  | Complexity & Uncertainty | Addressed inPlans | Designed and Managed inSolutions | Encountered in Goals & Solutions |  |
|  | Approach | Plan-focused | Team-focused | Stakeholder-focused |  |
|  | Communications | One-way | Two-way | Multiple |  |
|  | Client | Validate Deliverables | Collaborative Involvement | Leadership Roles |  |
|  | Success Drivers | Triple Constraint | Value-added | Business Value |  |
|  | Team | Independent | Dependent | Collaborative |  |
|  | Team Members | Specialists | Generalists | Facilitators |  |
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|  | **RBS: Requirements Breakdown Structure** |  |  |  |
|  | Project Goal and Solution |  | **Project Scoping Process** |  |
|  |  | Requirements |  | COS |  |
|  |  |  | Functions |  |  | RBS & PMLC |  |
|  |  |  |  | Sub-Functions |  |  |  | POS |  |
|  |  |  |  |  | Processes |  |  |  |  | WBS |  |
|  |  |  |  |  |  | Activities |  |  |  |  |  | [Functional Decomposition] |  |
|  |  |  |  |  |  |  | Features |  |  |  |  |  |  |  |
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**TPM: Traditional Project Management**

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| **Characteristics**Well defined goal and solutionRepetitive activitiesFew expected changes | **Strengths**Entire project scheduled at beginning of projectResource requirements known from startMost skilled team members not requiredCo-location of team members not required |
| **Weaknesses**Requires complete and detailed plansCosts too muchDoes not accommodate change wellDeliverables realized late in the projectMust follow a rigid sequence of processesNot focused on client value | **When to Use**Simple projectsShort time of completionSingle deliverableRepeatable projectsControl of resourcesAvailable templates |

**APM: Agile Project Management**

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| **Characteristics**Goal well defined but solution notFlexible approach & Changes expectedSkilled team members are generalists rather than specialistsCo-location of team members recommended | **Strengths**Deliverables or processes defined during projectResources strategically utilizedLean operations possible Designed for changeFocus on client value |
| **Weaknesses**Requires two-way communicationRequires increased client involvementDeliverables not completely known initiallyProject progress dependent on skilled team members | **When to Use**Complex projectsGoals important even though solution is not well definedIncomplete definition of deliverablesUnique learning and discovery needs |

**xPM: Extreme Project Management**

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| ***Characteristics***Goal and solution not well definedHigh uncertainty and complexityStrong creativity in teamHigh client involvement | ***Strengths***Multiple complex goals Maximum flexibility in project executionMaximum speed in project deliverablesHigh client involvement |
| ***Weaknesses***High risk of failureVariability of resultsSubjectivity in defining project successHigh client involvement | ***When to Use***Undefined projectsSignificant, long-term benefits desiredR&D |

**Applications**

**What specific types of projects would fit in each cell?**

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|  |  |  |  | Mfg | Const. | Eng. | Urban Devel. | HighTech. | R&D |  |
|  | TPM | Linear |  |  |  |  |  |  |  |  |
|  |  | Incremental |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  | APM | Iterative |  |  |  |  |  |  |  |  |
|  |  | Adaptive |  |  |  |  |  |  |  |  |
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|  | xPM | Extreme |  |  |  |  |  |  |  |  |
|  |  | Emertxe |  |  |  |  |  |  |  |  |
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**What specific types of projects would fit in each cell as moving from one to another?**

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|  | From | To |  | Mfg | Const. | Eng. | Urban Devel. | HighTech. | R&D |  |
|  | Linear | Incremental |  |  |  |  |  |  |  |  |
|  | Linear | Iterative |  |  |  |  |  |  |  |  |
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|  | Iterative | Linear |  |  |  |  |  |  |  |  |
|  | Iterative | Adaptive |  |  |  |  |  |  |  |  |
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|  | Extreme | Adaptive |  |  |  |  |  |  |  |  |
|  | Emertze | Extreme |  |  |  |  |  |  |  |  |
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