**Project Management Essentials**

Agile

Standard Operating Procedure

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# Introduction

## Purpose

PM Essentials (Project Management Essentials) is a project management process made up of tools and templates that empowers its users to be more efficient and effective in project delivery regardless of project size or complexity.

The Project Management Office (PMO) at DIR has created the PM Essentials process to help enable state and local entities to achieve their core missions through successful project delivery. Using these tools and templates can help your organization achieve project consistency, standardization, and project success. As PM Essentials is based on the Project Management Institute’s (PMI’s) Project Management Body of Knowledge (PMBOK) it employs industry-accepted standards of practice.

We note that for Texas state agencies, PM Essentials does *not* supersede the Texas Project Delivery Framework (TPDF) if projects meet the [Major Project Criteria](https://dir.texas.gov/View-Resources/Pages/Content.aspx?id=24).

## Scope

Anyone formulating and running a project can use these tools and templates. The PM Essentials process can be used to manage projects regardless of size, complexity, type, or methodology. For smaller projects, the Project Toolkit may be all that is needed. This is a basic all-in-one template collection that may serve the entire project life cycle including multiple sprints.

|  |  |  |  |
| --- | --- | --- | --- |
| **Template Name** | **File Format** | **Description/Purpose** | **Project Phase** |
| **Project Toolkit** | **.xlsx** | **The Project Toolkit is a comprehensive collection of templates for managing a project. Small, medium, and even large efforts, may be conducted with this file.** | **Execution, Monitor and Control** |

For larger projects, the **bolded** templates are the minimum recommended when using PM Essentials, regardless of project size or complexity.

| **Template Name** | **File Format** | **Description/Purpose** | **Project Phase** |
| --- | --- | --- | --- |
| **Business Case** | **.docx** | **The Business Case defines the business need along with the necessary information, from a business standpoint, to determine whether or not the project is worth the required investment. It demonstrates alignment to business and strategic objectives and is used to prioritize the project among other project demands.** | **Initiation** |
| **Charter** | **.docx** | **The Project Charter officially authorizes the project and allocates resources. The chartering process forms the project core team and officially kicks off the execution of a project.** | **Planning** |
| Project Management Plan | .docx | The Project Management Plan defines "how" the project is executed, monitored and controlled, and closed. | Planning Execution, |
| **Schedule** | **.mpp  -OR- .xlsx** | **The Project Schedule is created to help plan and track important tasks and dates within the project.** | **Planning, Execution** |
| **Backlog** | **.xlsx** | **The Product Backlog, and its subset the Sprint Backlog, provides the scope of the development effort in an Agile framework.** | **Planning, Execution** |
| Meeting Notes | .docx | The Project Meeting Notes Template is used to document and communicate notes for all project meetings. | Execution, Monitor and Control |
| Status Report | .docx | The Status Report is utilized for communicating the overall health of the project to the core team and key project stakeholders to keep everyone abreast of project progress. | Execution, Monitor and Control |
| Change Request | .docx | The Project Change Request (PCR) is used by the Project Manager to request a change to the project scope, schedule, costs, project milestones and/or deliverables. | Execution, Monitor and Control |
| Test Planning | .docx | The Test Plan is developed when the quality effort is large, complex, or requires coordination of testing elements (e.g. testers, environments, etc.). | Planning, Execution, Monitor and Control |
| Testing Scripting | .xlsx | The Test Script is developed to specify the steps taken by the tester in individual tests so that flaws can be replicated and addressed by the developer. | Planning, Execution, Monitor and Control |
| Transition Plan | .xlsx | The Transition Plan is developed to maximize the positive effect of a go-live event, and minimize the negative impacts. Readiness, cutover orchestration, communication, and rollback planning are included. | Planning, Execution, Monitor and Control |
| **Lessons Learned** | **.docx** | **The Lessons Learned document is used to identify and preserve the lessons learned on each project. The purpose of this document is to help the project team share knowledge gained from the experience. A successful Lessons Learned program will help project teams repeat desirable outcomes and avoid undesirable outcomes, on future projects.** | **Closure** |
| **Project Closure** | **.docx** | **The Project Closure document formalizes the completion of the project.** | **Closure** |

# PM Essentials Process for Agile

## Project Characteristics

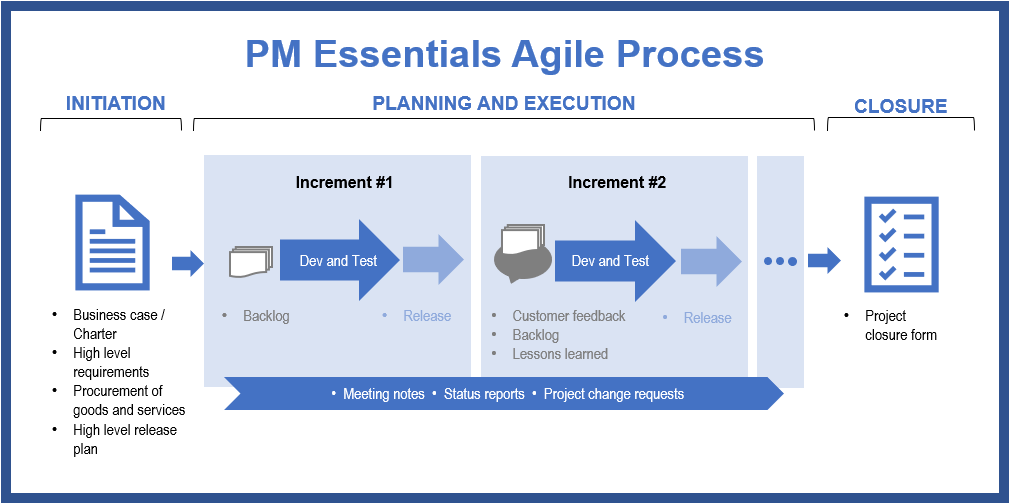
For projects being managed in an agile manner, the stages of the project do not adhere to sequential phases the same way a traditional waterfall approach does. Unlike a waterfall approach, an agile methodology focuses on developing and deploying solutions as quickly as possible, making adjustments as the project progresses. This usually means releases of smaller increments of work at shorter intervals.

PM Essentials recommends that a project’s initiation follows a process that is similar to a waterfall methodology, where information regarding the business case for investing effort and money into a project is compiled and analyzed. Once the vision for a project is established, the desired end result is defined, cost–benefit analysis has been performed, and the organization has determined that the investment is worthwhile, the actual execution of the project can begin.

Unlike waterfall, the planning and execution of an Agile project undergoes a repeated iterative cycle in which products are released in increments. After the initial increment, each iterative cycle undergoes a feedback, requirements, and lessons learned reviews, and then development and testing, and finally an incremented release. An Agile approach allows for an indefinite number of incremented releases before the overall development effort is deemed completed.

Similar to initiation, PM Essentials for Agile recommends a single project closure process to occur once the envisioned scope identified in the charter have been fulfilled.

The diagram below provides a process model for using PM Essentials tools in an Agile fashion.



## Role of the Project Manager and Team

Agile projects not only follow a slightly different process from a traditional waterfall project, but some of the roles within the project team differ as well. In some of the Agile methodologies, there is no specified “project manager” role. Instead, terms such as **scrum master**, as is the case in the Scrum Methodology, or **team lead**, in other Agile project team structures, are used.

In Agile projects such as Scrum, schedules are more fluid. With the initiation of each new sprint, the goal and expected output of the sprint is determined by analyzing a combination of the backlog, feedback from the customer regarding the current state of production, and any reprioritization of project objectives, needs, requirements, etc. Project teams must be flexible and able to adjust to changing requirements, and/or re-prioritization of requirements. In order to facilitate this approach, the lead must themselves be flexible and ready to make adjustments quickly, rather than adhere to a pre-defined plan. Removing project obstacles, re-organizing the effort, and keeping team members moving forward with the changes, are the expected activities of an Agile lead.

While the lead is making sure that the project is on course for each iteration, the team members must produce for each sprint. One key team member is the **product owner**, who is typically a project's key stakeholder. Part of the product owner responsibilities is to have a vision of what he or she wishes to build and convey that vision to the team. This is key to successfully starting any agile project. This person is ultimately responsible for prioritizing requirements/deliverables as well as re-prioritizing requirements and deliverables throughout the life of the project, specifically at the kickoff of each new sprint.

**Other team members** have other responsibilities to fulfill and are also seen in the waterfall model. Some common roles are business analysts, modelers, programmers, testers, and release managers. These are the hands-on subject matter experts who design, build, verify, and deploy what the project stakeholders, especially the product owner, have been expecting or needing from each sprint. Team member responsibilities include absorbing the goals for the sprint or iteration, reporting on progress daily, communicating with the product owner to clarify the business need, and collaborating closely with fellow team members as components for that sprint are built out.

# Components of an PM Essentials Agile Process

## Project Initiation

The Initiation reviews the business idea and turns it into a formal project. It is important that in the initiation of the project, the minimal viable product is defined.

### Key Activities

* Identify the business issue or business need to be addressed
* Identify the benefits of doing the project, including financial impacts such as Return on Investment
* Refine and formalize scope statement
* Define expected outcomes and key milestones including an estimate of the number of sprints that may be required and/or the overall duration of the engagement rather than specific detailed requirements that need to be met.
* Develop schedule (sprint plan and/or release schedule)
* Identify project risks and constraints
* Identify key stakeholders and required resources sprint kickoff meetings
* Identify and procure project team members, and define roles and responsibilities
* Formalize development plan
  + Environments to be used
* Change migration/promotion plan

### Tools and Templates

#### Business Case

The Project Sponsor or Business Owner prepares this artifact. This template will address the business issue and the expected business outcome as well as the key resources necessary for the project. It defines how the project will align to the goals of the agency and/or state.

#### Project Charter

The charter defines the project scope, estimates a timeline, and establishes a project budget. In a waterfall approach, this document is an elaboration / supplement to the Business Case, but in an Agile approach, it may make sense to combine these two documents. The important factor to keep in mind is that these documents, traditionally resulting in relatively detailed plans, are to remain high level. The emphasis should be to establish and prioritize high level requirements (functions of the product being developed). When initiating sprints, during the project execution, these requirements / functions will be developed and released in an incremental fashion, based on priority. And, these priorities may, and often do, shift throughout the life of the project, so each sprint needs a kickoff.

#### Backlog

This template provides a mechanism to track product/project deliverables against requirements to ensure business and product requirements are met. When using an Agile approach, these requirements may take the form of higher level functions of the product being developed. The detailed requirements / specifications that are defined early in the project, when leveraging a waterfall approach, are fleshed out during sprints through collaboration between product owners, users and developers.

When developing requirements consider using pictorial representations of business process and/or user interactions with the system being developed. Story boards, process flows and user stories are common techniques for documenting requirements in Agile projects.

A user story is a tool used in Agile software development to capture a description of a software feature from an end-user perspective. The user story describes the type of user, what they want and why. A user story helps to create a simplified description of a requirement.

## Project Execution

In executing an agile project, the development and release of a product, service, etc., is conducted in an incremental or iterative approach. This means that a portion of the overall product is developed and deployed, and then the next portion is developed and deployed, and so on. The release plan outlines what each increment (“sprint” for example) will deliver. Throughout the life of the project, the release plan and the output of the various sprints are continuously re-evaluated and possibly re-prioritized, based on business and customer needs.

### Key Activities

* Sprint kickoff meetings
* Daily check-in meetings; also known as Scrum meetings
* Collect/document requirements and deliverables not identified in earlier stages of the project so that they can be incorporated into upcoming sprints
* Collect/document Lessons Learned so that future sprints can be adjusted accordingly

### Tools and Templates

#### Backlog

During execution, the Backlog will provide the detailed features and functionalities to be considered for, or committed to, development.

#### Project Toolkit

The Project Toolkit can be used to track action items, decisions, deliverables, risks, issues, stakeholder contact information, and more.

#### Meeting Notes

The Meeting Notes template is meant to be utilized at all project meetings to document the meeting agenda, action items, decisions made in the meeting, who attended the meeting and scheduling the next meeting.

#### Status Report

The Status Report communicates key performance indicators (KPIs), key project dates, and key risks/issues related to the project in order to keep all project players equally informed.

#### Project Change Request (PCR)

Use this form to document major changes in the project that impact scope, schedule, costs, quality, or key project performance and health. This form should *not* be used to manage daily operational project management, project monitoring and control activities, as doing so will add significant overhead to the project management activities.

## Project Closure

In the Project Closure Phase, the project artifacts are archived in the project repository, the project activities are completed, and the project transitions to operational status.

### Key Activities

* Formally transition project to “Operations”
* Archive project artifacts
* Document lessons learned and hold review meeting
* Plan a project post-mortem
* Gain approval for forma closure of the project

#### Lessons Learned

Populate the Lessons Learned document using Project Toolkit information and any other pertinent project artifacts, as well as project team feedback obtained from any lessons learned brainstorming.

#### Project Closure Form

The Project Closure Template documents confirmation that all in scope business objectives have been met and necessary project items have been finalized. This includes making sure all listed project deliverables have been completed and project documentation saved in suitable shared storage. This template also allows you to document how outstanding actions/issues are to be handled.

# Roles and Responsibilities

Below are some typical roles found in an Agile development effort.

| **Role** | **Responsibility** |
| --- | --- |
| Product owner | Assures the business need and requirements are clear to developers who are delivering the solution. Owns the backlog. |
| Architect | Also known as technical architect, system architect, technical designer, etc. Assures the technical solution aligns with the goals, standards, and existing functionalities of the system. |
| Lead, scrum master, (usually filled by project manager) | Assures sprint tasks are understood and completed by the team. Removes obstacles and keeps channels of communication open with stakeholders. |
| Web designer | Develops the look-and-feel for browser-based applications. |
| Programmer | Writes the code that the solution executes to solve the business problem. |
| Database administrator | Provides database support for the solution being developed. |
| Business analyst | Liaison between the business and the technical sections to help identify the solution. May be involved with tool, testing, and requirements support. |
| Tester (unit, system, UAT) | Person(s) who validate that the solution works for the business. May be a product owner, business analyst, end users, developer, and/or project lead. Different testers are likely involved at different stages of the sprint. |
| Release manager | Provides the technical planning and coordination needed to deploy the solution. |

# Glossary and Acronyms

Agile – a development model in which, among other characteristics, emphasizes working software and effective response to changing requirements

Backlog – a collection of requirements to be implemented in a product

Increment / iteration – the segments of an Agile effort in which development is planned, executed, and released in smaller portions

Kickoff – the first meeting of a sprint

KPI – key performance indicator, a metric or mark that gauges the performance of an activity usually to inform the health of an effort or project

PBI – Product backlog item

PCR – project change request, a mechanism to document and effect a significant change to project goals and objectives.

Post-mortem – a post-project review, sometimes called lessons learned

Product owner – ensures that the solution is relevant and clarified to the development team; is responsible for the backlog

Scrum – a popular project methodology aligned with the Agile model with focus on teamwork and iterative software releases

Scrum master – the lead who ensures that the development team and product owner are working toward a common sprint outcome.

Sprint – the effort over a fixed period (usually measured in months) in which a specified software feature(s) is developed, tested, and released.

Waterfall – in contrast to an Agile model, a project methodology in which all of the features are rolled out in one release through a linear development process. Sometimes described as a “big bang” deployment.

# Appendix

As an instructive example, a full project cycle is provided including a detailed increment/sprint description:

1. **INITIATION**
   1. Identify the business issue or business need to be addressed
   2. Identify the benefits of doing the project, including financial impacts such as Return on Investment
   3. Refine and formalize scope statement
   4. Define expected outcomes and key milestones including an estimate of the number of sprints that may be required and/or the overall duration of the engagement rather than specific detailed requirements that need to be met.
   5. Develop schedule (sprint plan and/or release schedule)
   6. Identify project risks and constraints
   7. Identify key stakeholders and required resources sprint kickoff meetings
   8. Identify and procure project team members, and define roles and responsibilities
   9. Formalize development plan
      1. Environments to be used
      2. Change migration/promotion plan
2. **SPRINT** (planning and execution)
   1. Sprint kickoff meetings
   2. Daily check-in meetings; also known as Scrum meetings
   3. Collect/document requirements and deliverables not identified in earlier stages of the project so that they can be incorporated into upcoming sprints
   4. Collect/document Lessons Learned so that future sprints can be adjusted accordingly
   5. Sprint Planning
      1. Development Team event. Open to all, facilitated by Scrum Master
      2. Development team forecasts the “Ready” Product Backlog Items (PBI) they will get to “Done” within the timeframe of the sprint
      3. Only “Ready” PBIs are candidates
      4. Number of PBIs influenced by prior sprint velocity and current sprint forecast capacity
   6. Daily Scrum
      1. Development Team event. Open to all, facilitated by Scrum Master
      2. Development Team coordinates activities makes the plan for the day
      3. Blocking issues brought to the attention of the Scrum Master for assistance to resolve
   7. Development and testing
   8. Communication
   9. Sprint Review
      1. Scrum Team event for the benefit of project stakeholders. Open to all, facilitated by Scrum Master.
      2. Product Owner describes PBIs and workflows (the increment) that got to Done since the most recent Sprint Review
      3. Development Team demonstrates these Done PBIs
      4. Stakeholder feedback solicited to help inform PO next steps
      5. Project issues discussed
   10. Sprint Retrospective
       1. Scrum Team only event. Facilitated by Scrum Master.
       2. Scrum Team reflects on previous sprint looking opportunities to improve
       3. Scrum Team reviews this working agreement making modifications as needed and desired for process improvement
       4. Scrum Master takes the lead to resolve issues beyond the control of the Scrum Team
   11. Release
       1. Planning and orchestration
       2. Deployment
   12. Back to sprint planning (2.5) if not all sprints are completed
3. **CLOSURE** (after all sprint cycles are complete)
   1. Formally transition project to “Operations”
   2. Archive project artifacts
   3. Document lessons learned and hold review meeting
   4. Plan a project post-mortem
   5. Gain approval for forma closure of the project

# Feedback

If you have any questions on PM Essentials or on project management practices, please contact DIR’s PPMO at [ppmo@dir.texas.gov](mailto:ppmo@dir.texas.gov).