

PROJECT MANAGEMENT – A PRIMER

Griffin Enterprises

Project Management Primer:
Definition and Process

GRIFFIN ENTERPRISES

Project Management: 101

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What is a Project?

Key Definition

A project is defined as something *temporary* and *unique* performed by people with a deadline for delivery that incorporates a plan, follows a process, and may be completed with a limited amount of resources.

A project can be something as simple as doing laundry where one person performs all the tasks, or as complex as building an intercontinental pipeline. They are often times tactical in nature and may be a critical part of a business strategy. Some examples are:

- Effecting a change in structure, staffing, or organization
- Implementing a new business procedure
- Developing/Acquiring/Modifying Information systems
- Constructing buildings or facilities
- Running a campaign for political office
- Developing a new product
- Developing a new service

Every project is temporary in that it has a definite beginning and an end. It can last a day, a month, or span years. Even though the project is temporary in nature, it often times produces lasting results. In addition to a definitive start and target delivery date, projects often enlist a team of people who will disband once the goals and objectives have been met and the end result produced.

Based on the development methodology used, the players and deliverables of a project may have different titles, however the key steps involved remain the same.

Why the need for a Project Manager?

Since projects are often completed by teams comprised of members from different departments, divisions, or companies with different reporting structures, communication is a constant key deliverable. Communication between team members, management of representing members, sponsors/clients/stakeholders, vendors, etc., is the glue that sets, resets, and maintains the expectations of everyone involved. Additionally, projects regardless of scope require resource management, schedule management, budget management, arranging/rearranging scope and deliverables, and enforcing stakeholder milestones or deliverables require a designated person to provide that administrative function. The Project Manager is the title given to that person responsible for the administration of a project. Depending upon development methodology used, the title of Project Manager may be renamed, but the ultimate responsibility for the project remains the same.

The Project Manager (PM) is tasked with facilitating communication to all parties. The PM ensures all administrative tasks are completed, and for managing resources, deliverables, budget, and expectations for delivery.

The Project Team (PT) can work together in unison in the same location, or its members can be across companies, states, countries, and continents. The Project Manager is responsible for ensuring that communication flow is easy and continuous in order to produce the best results for project delivery.

Key Skills a Project Manager must have:

- Communication – the ability to exchange ideas and interact at all levels verbally and in written form.
 - Expectation management – the ability to set and manage opinions, attitudes, outlooks, and perceptions through continuous flow of communication and acknowledgement of informational input.
 - Team Player – the ability to be a team member versus manager in each of the project phases or iterations
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- Time management – the ability to oversee the sequence of events, intervals between events, and resources required to attain the deliverables within each event.
- Forecasting – the ability to estimate deliverables and time frames based on goals along with their risks and uncertainties.
- Budgeting – the ability to determine planned expenses and predict unplanned expenses, and identify trade offs in accomplishing a delivery within cost constraints.
- Planning – the process of determining tasks required to achieve a desired goal
- Foresight – the ability to visualize iterations of delivery in order to set and manage expectations.

The Project Manager often acts as a maestro pulling all the players and pieces of a project together to form a cohesive and productive unit. Sometimes this requires the ability to act as mediator, sometimes it is the ability to be a collaborator, and sometimes it's the ability to be the final say.

Since a Project Team is made up of many personalities, egos, disciplines, and technical abilities it is important for the Project Manager to have an alliance to all members, yet maintain independence from any one participatory group. Project Managers maintain an objective distance when strong opinions clash. Subject Matter Expert (SME) opinions are taken into consideration when making a decision, however input from the group as a whole is considered valuable.

Every project needs a Project Manager in order to maintain expectations, handle all administrative tasks relating to the project, keep communication channels flowing, monitor the project constraints of scope, time, and budget, maintain the integral nature of the team dynamics.

The Project Process

Across all methodologies

There is a standard project management process that spans all industries, methodologies, and type of project. It consists of five key courses of action that we will call steps where the amount of detail in each step is determined by the type of development methodology used. The key courses of action (steps) are:

1. Initiation – recognizing that a project addresses a need and should begin.
2. Planning – creating and maintaining a workable scheme to accomplish the business need.
3. Execution – coordinating people and other resources to carry out the plan.
4. Control and Management – ensuring that project objectives are met by monitoring and measuring progress and taking corrective action when necessary.
5. Closing – formalize acceptance of the project and bringing it to an orderly end.

Each of these courses of action is discussed in the following pages. In each step, depending upon the methodology used, the process followed may be expanded or ignored.

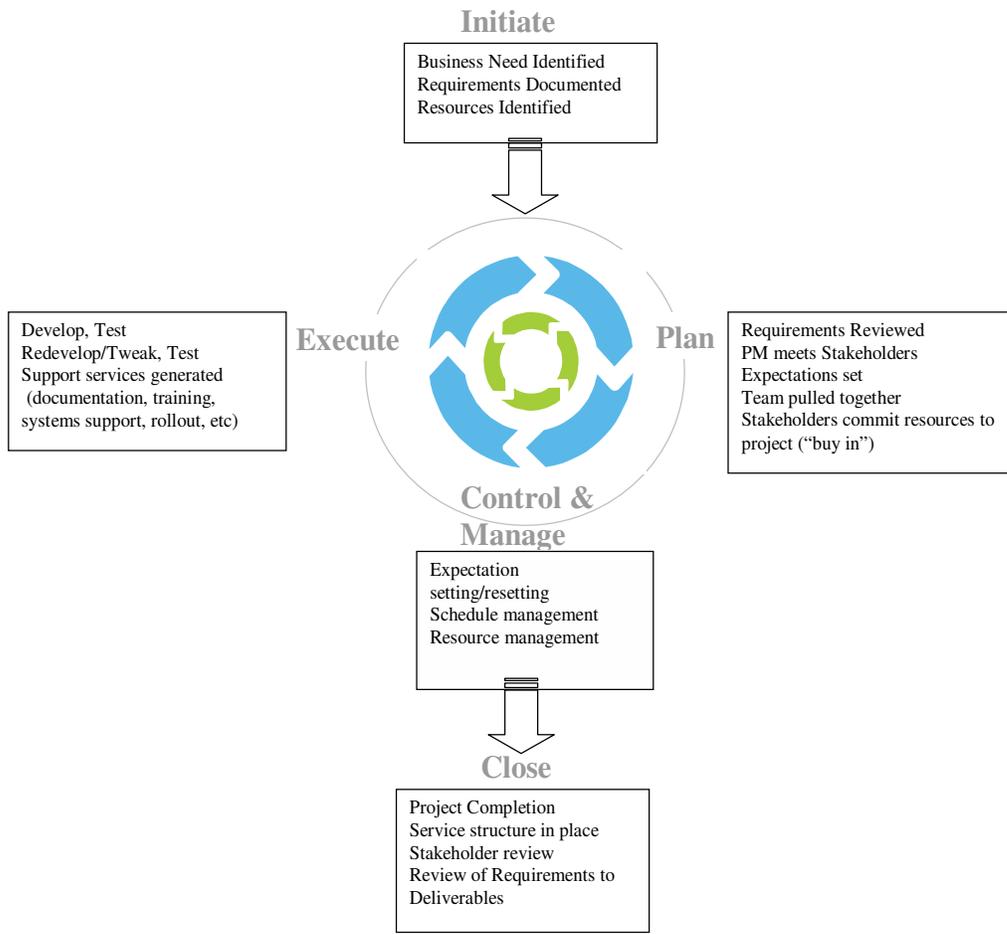


Figure 3-1: The Project Process

Initiating Step

Initialization is the basic first step. It involves identifying a gap where the completed project addresses a need in the business strategy.

A key part of this process is to get all necessary approvals and “buy ins” (meaning \$ and resources) to begin the project. Those people whose approval is required are called Stakeholder(s). A Stakeholder is the person putting up the money, providing equipment and personnel resources. He/She is ultimately the person who will receive the larger benefit from the project undertaking. Ultimately, the stakeholders are the key decision makers and may be one or more individuals or from one or more departments. This process involves getting the stakeholders identified and:

- Obtaining commitment from an organization to begin the project
- Identifying the project as part of the business strategy
- Obtaining the appropriate approvals to begin the project
- Obtaining budget monies to be allocated to the project

Planning Step

The second step is to plan. This entails:

- Scope Planning – developing a written scope statement as the basis for future project decisions and verifying funding for the project.
- Scope Definition – subdividing the major project deliverables into smaller, more manageable components (defining your milestones/iterations/sprints) and identifying target dates for each.
- Activity Definition – identifying the specific activities that must be performed to produce the project deliverables as well as identifying dependencies.
- Activity Sequencing – identifying and documenting timelines to include identified dependencies and what the potential risk trade offs are in issues with dependencies. Example: Release/Milestone planning.
- Activity Duration Estimating – estimating the number of work periods that will be needed to complete individual activities. Determining when scope change is acceptable. How will Features planned and unplanned be handled.
- Schedule Development – analyzing activity sequences, activity duration, and resource requirements to create the project schedule.
- Resource Planning – determine what resources (people, equipment, materials) and what quantities of each should be used to perform project activities. This step identifies the skills and availability of resources with the necessary skills.
- Cost Estimating – developing an estimate of the costs of the resources needed to complete project activities
- Cost Budgeting – allocating the overall cost estimate to individual work items
- Project Plan Development – taking the results of other planning processes and putting them into a roadmap. Incorporating planned and unplanned events into an overall map of the project.

Planning is one of the most important steps in the process. If the planning is done completely and with a lot of detail, the delivery is often without delay. Usually a project will lag, or be faced with hidden/unforeseen issues when planning has not carefully been completed.

Depending upon the Methodology used one, a few, or all of the above steps will be completed.

Executing Step

The third step is the Execution. This is where the actual creation of teams, project components, etc., is done. It is also where quality controls come into the picture. This is usually the most intense part of a project because it is here that the team is fully engaged. It is here that information must regularly be disseminated to/from/within your project team. It is also here that the effort is made to create the end result of your project. Steps in the Execution Process are:

- Project Plan Execution – Carrying out the project plan by performing the activities included in it. Usually the project plan is based on the Business Requirements identified in the Initialization step.
- Scope Verification – formalizing acceptance of the project scope; what is the criteria upon which the stakeholders approve the end result. What is the milestone/product deliverable goal? What can be released or delivered in scope within the specified timeframe?
- Quality Assurance – evaluating overall project performance on a regular basis to provide confidence that the project will satisfy the relevant quality standards
- Team Development – developing individual and group skills to enhance project performance. This usually involves self-directed teams who ebb and flow according to the project needs.
- Information distribution – making information available to project stakeholders, team members, clients, internal and external observers in a timely manner.
- Solicitation – obtaining quotations, bids, offers, or proposals as appropriate.

Controlling and Managing Step

The fourth step is Control and Management. This is a key step for the person identified as the Project Manager. It is the Project Manager who is ultimately responsible for developing project plans, creating and publishing agendas, hosting/facilitating team meetings, and distributing minutes of meetings. The items that are managed and/or administered in this process are:

- Project Plans – managing to schedule, conducting release planning, prioritization of deliverables, backlogged items, etc.
- Agendas and Minutes of Meetings – keeps meetings focused and to a set schedule which is followed by documented and communicated decisions affecting the project.
- Monitoring progress of milestones and deliverables – sets and manages expectations, helps to establish perceptions of timeliness of releases.
- Resolving issues and taking corrective action when necessary – acts as the moderator when personalities clash, becomes key “go to” person throughout the entire project.
- Logistics – coordinates equipment, locations, test suites, 3rd party/off shore resources, and events pertaining to the project.
- Politics – maintains a neutral position when projects are highly visible and ensures that expectations are managed accordingly.
- Continuous formal and informal communications. – one of the most important aspects of this step. When development is fast paced and impacted continuously from stakeholder(s)/client(s) input.
- Flight Management – the ability to see the project and its global impact from a broader view in order to fully understand the risks, benefits, effects from immediate and peripherally impacted organizations.

The key action in this step for the Project Manager is the ability to take a myopic development view and expand it to encompass a broad view perspective from management, end users, customers, etc.

Communication is the key to this step. Every person directly and peripherally involved in this project need to feel 100% immersed in the process. It is usually the expectations and perceptions of a project and its process that make it successful.

Closing Step

The final step in the project management process is the Closure. This step occurs just prior to the project becoming implemented and continues until a post-project review is completed. This step involves the key players accepting each deliverable in the project and what was created by the project team in its entirety. It also involves creating an implementation plan, creating a support structure, and user training (if needed), and making sure there are the necessary approvals/sign offs in place. Some key points to this process are:

- User Acceptance
- Implementation
- Support and User Training
- Review of project initiative and milestones
- Signoffs
- Completion and settlement of contracts
- Post Project Review

The final step in this process is the post-project review where the team members, as well as the key players discuss what worked and what didn't to better improve the process for the next project.

The Life of a Project

A project isn't a project until it is defined. It isn't defined until there is a business or consumer need that must be addressed. As such, most projects start with a sponsor, client, or stakeholder requesting that a business need be met.

The Initialization of a project involves, at a senior level, the Client/Sponsor making a request to the senior staff where the Technical, Development, and Business representatives agree to provide a resource. The Technical, Development, and Business entities (may be the same department, i.e. IT, or may be different operational divisions) filter down the request and resources from their respective areas are assigned.

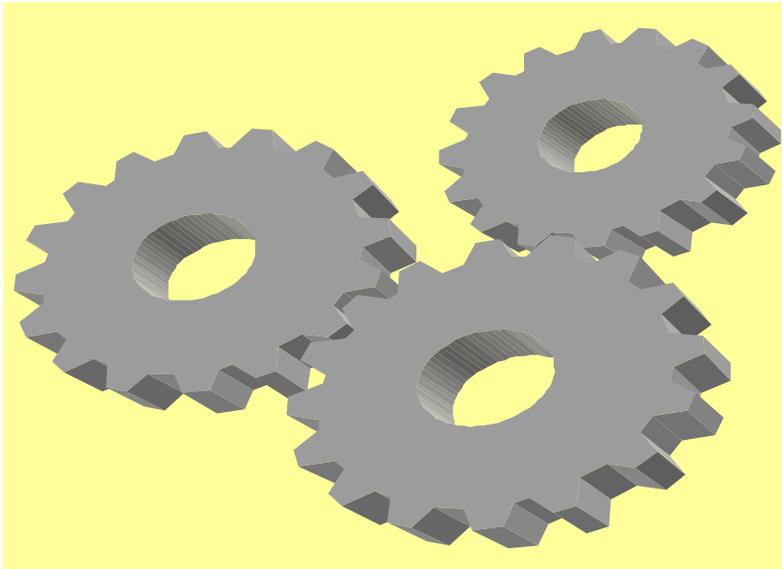


Figure 4-1: Life Cycle as interdependent cogs

Each phase in the project life cycle can be considered a cog in a wheel. Each cog interacts with the other; sometimes the cogs are independent (the completion of one cycle begins another) and sometimes all cogs are dependent (all work continuously together). It depends upon the development methodology.

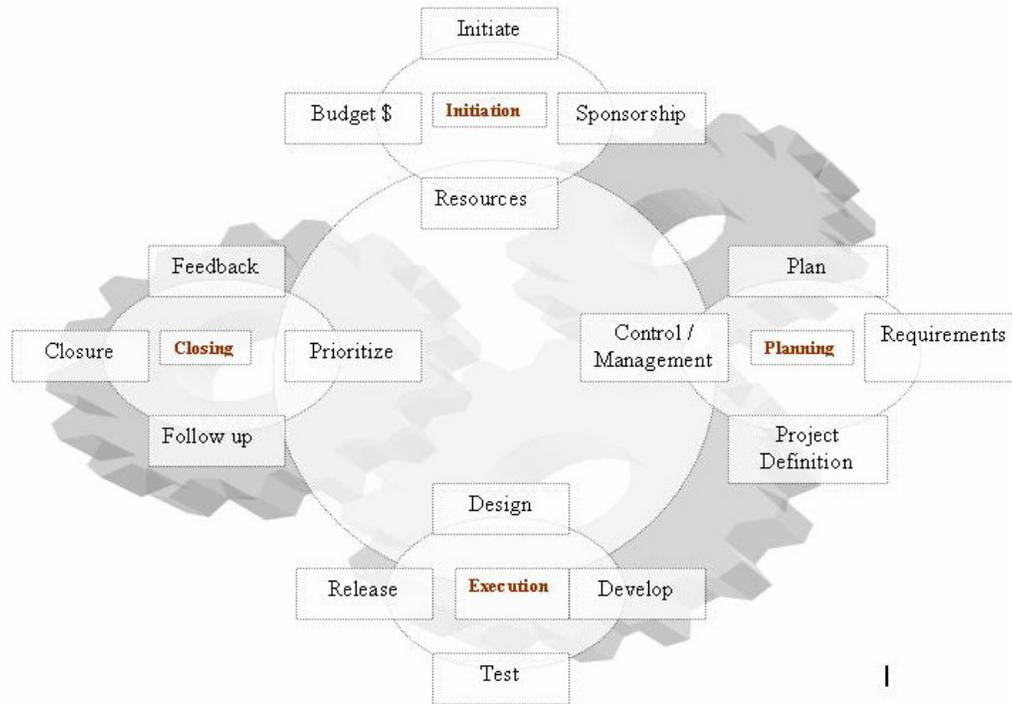


Figure 4-2: Project Life Cycle

In the initialization step of the Project Life Cycle (PLC), the Business Analyst meets with the stakeholder(s) to clearly identify the business need with as much detail as possible. The documentation of this business need as viewed by the stakeholder is called the Business Requirements Document (BRD) process.

Business Requirements

The Business Requirements or data gathering is the second step in project initiation. It is from this step that all else is defined in terms of technical requirements, scope, change management, funding, budgets, etc. The documentation function is usually performed by a Business Analyst working closely with the Client/Sponsor. It is during this process that the Business Analyst will meet to gather requirements using user stories, scenarios - a day in the life of an end-user, and carefully documents the workflow, dataflow, issues, and needs:

1. Meet with the identified business stakeholder(s)
 - What is the current process?
 - a. Map workflow, data flow, process flow
 - What is the business issue?
 - How is the business looking to resolve the issue?
 - Define project from the business' perspective

- Is the project funded?
 - Who are the key business players?
 - What are the key milestones and respective target dates for the business?
 - What is the requested delivery timeframe?
 - What are the benefits to doing this project?
 - What are the business risks associated?
 - What are the dependencies?
 - How will this project impact other businesses/programs?
 - Preliminary meeting with technical personnel to identify resources
 - Is what the business requests plausible?
 - What resources will be required?
 - a. Internal/external
 - b. Skill set(s)
 - Obtain resource approvals to be on the team
2. Meet with Technical Personnel identified
- Is what the client/sponsor requests plausible to do?
 - What technical resources will be required?
 - a. Internal/external
 - b. Skill set(s)
 - What are the technical requirements?
 - a. Hardware
 - b. Software
 - c. Network infrastructure
 - d. Wiring
 - e. Storage
 - f. Communication
 - g. Project Precedents
 - What is the project scope
 - a. Subdivide major project deliverables into smaller components
 - i. Milestones/Iterations
 - ii. What will NOT be done
 - iii. What is the gray area that may need to be addressed as the project unfolds
 - How will this be addressed?
 - Who are the key decision makers?
 - How will changes be handled
 - a. Method for handling change
 - b. Risks vs rewards
 - c. Financial impact
 - d. Time impact
 - e. Decision authority
 - f. Go/NoGo
 - What are the risks involved
 - What are the dependencies
 - a. Logistics

- b. Financial
 - c. Hardware
 - d. Software
 - e. Program(s)/Application(s)
 - f. Network(s)
 - g. Communication(s)
 - h. Timing
 - i. Resources (contractual, internal, external, off shore)
 - What are the assumptions
 - What is the development/test/implementation time estimate?
3. Obtain Project Identification Code/Number if applicable
 4. Prepare Formal Documentation
 - Create Business Requirements Document (BRD)
 - a. Document reviews with business, technical, support staff
 - b. Edit documents based on reviews.
 5. Obtain Signoffs
 - PM meets with business sponsors and key stakeholders
 - Explain next steps and set expectations
 - Submit document to technical staff

Creating a Project Team

This is where the Business Analyst and the Project Manager review the business requirements document, meet with the client/sponsor/key business stakeholder to iterate their project/business needs and set expectations for the project going forward. During this phase, the primary sponsor/stakeholder may identify a project stakeholder(s) to participate in the project process or be the resource to obtain future signoffs or decision making.

The Project Stakeholders are individuals who are directly involved in the project and will be negatively or positively affected as a result. These persons are identified along with the business client/sponsor/key stakeholder:

- Business Stakeholder/Client
- Project Manager
- Vendor(s) / 3rd parties involved
- Technical Staff / Subject Matter Experts
- Consultants and/or Off Shore Development Staff
- Business Support (legal, financial, etc) may be involved depending upon the nature of the project

Usually, these project stakeholders will have final decision making authority. Also during this process the following is determined:

- Who will have final say in the exclusion or inclusion of scope changes
- Who will have final technical decision making authority?

- How will the team be managed?
- What is the role of each stakeholder during the project?
- What is the Chain of command internal AND external to the team

In addition to the identification of key stakeholders, within this step additional resources are identified. Typically these resources are determined based on the development of the business case (if needed), Functional Design Document (FDD), Test Plan, Solution Design, and Project Plan documents. Additional resources can be:

- Internal or external
 - Resources pulled from other internal groups
 - Resources to perform specific functions, i.e. automated testing
 - Resources to develop specific product or application pieces, i.e. off-shore development
- Full or part time
 - Utilized for a specific function or period

Resources should be known up front prior to the project being started to determine the points in the project that they should be included. Resources, as with project scope, tend to fluctuate during a project and it is the Project Manager's responsibility to ensure that this fluctuation does not negatively impact the project:

1. Identify and meet with project stakeholders
 - Determine decision making process and scope of authority
 - Set expectations
2. Schedule preliminary project meeting
 - Explain project
 - Identity scope and scope change process
 - Identify team members with availability and skill set
 - Explain process
 - Define roles
 - Determine regular meeting time/day/place
 - Provide outlined "draft" project plan for team review and skill-specific inputs
 - a. This draft should be based on the original meeting with the stakeholder and the details provided by the technical team in the business requirements document.
 - b. First order of business prior to the project kickoff is to review the project plan draft and obtain team member collaboration for scheduling, dependencies, resource requirements, assumptions, risks, milestones, and most importantly ownership for deliverables and timeframe confirmations.
 - Schedule project "kickoff"
 - a. This meeting should be a review of the revised project plan with every team member's input and confirmed time schedules

- b. Confirmation of Major Milestones throughout the project
- c. Confirmation and buy in of deliverables
- Create Project Documents
 - d. Functional Specification (Business Analyst and Technical Team)
 - Contains screen images
 - Contains workflows of data, systems, process
 - Contains map of deliverables in order of generation
 - Contains prototype reviews
 - Contains user test scenarios
 - e. Test Plan (Business Analyst, Project Manager, Technical Team)
 - Contains business case scenarios
 - Contains test logistics and timeframes
 - Identifies test resources
 - Defines test process
 - Contains items to be tested, expected outcomes, issue tracking
 - Defines issue resolution
 - f. Training and Documentation Materials (Business Analyst, Training, Documentation, Technical Team)
 - Identifies resources
 - Documents test and user acceptance training
 - Documents user materials
 - Documents technical support materials
 - Delivers user acceptance training
 - Delivers user documentation
 - Delivers end-user training

Creating a Project Plan

A project plan maps the life of the project, identifies responsible resources, presents milestones and the dependencies required for each, product design and development, test, implementation/delivery, and closure of the project.

The project plan itself is a living document. It changes as unforeseen issues arise, scope changes, business needs change. It is important for all team members to provide input into the project plan based on their areas of responsibility.

Usually the constants of the project plan are the start date and key milestones along with their deliverables.

A project plan:

- Lists all subtasks within each milestone
- Identifies resources for each task
- Defines dependencies

- Provides time estimates based on prior history and team input
- Identifies critical path(s) – the tasks with the longest time associated
- Identifies effort overlap
- Allows for scope change
 - a. An external event triggers (i.e. change in gov't regulation)
 - b. An error or omission occurred in defining scope
 - c. A value-added change
 - d. User requests additional functionality
 - e. Discovery during development
- Incorporates process for managing change
- Includes project management functions
 - a. Continuous meeting schedule throughout the project
 - b. Meeting events with stakeholders
 - c. Meeting events with various business boards
 - License review
 - Pricing
 - Federal approval agencies
 - International approval agencies

Design, Development

This part of the Project life cycle is a function of the Execution Step in the Project Management Process. It is where Project Managers are constantly coordinating people, resources, and logistics to facilitate the successful delivery of milestones. Here the technical members operate in a cycle of develop, test, redevelop while the other team members perform tasks specific to their subject expertise.

It is in this process that a scope changes occur and are managed with a risk-reward ratio determining the schedule, budget, customer value impacts against a go/no go change to the product/project.

Throughout this step the Business Analyst, Project Manager act as testers for prototypes and often provide for prototype meetings where business stakeholders (sponsors/clients) can view results in progress and expectations can be managed.

Each milestone or iteration of the project is accepted by the business stakeholder and formally signed off. The Project Manager facilitates this process in order to stay on schedule based on the original timelines established.

When, during a prototype review changes are requested, the Project Manager initiates the scope change process and returns the impact analysis back to the business stakeholder for final decision of go/no go to the requested change. In a client-focused environment changes are usually accommodated with the full knowledge and approval from the original business sponsor of schedule or cost impacts.

If the Project Plan is originally created to include scenarios of scope change, the schedule can be massaged to keep to the original delivery date.

Control and Management

Is the fourth function of the Project Management Process within the Project Life Cycle. It is where the Project Manager is responsible for: maintaining, monitoring, and managing :

- Scheduling all meetings and their logistics
- Preparing and publishing agendas
- Managing meetings to the agendas published
- Publishing meeting minutes
- Updating project plans to reflect changes
- Publishing status reports to all stakeholders
- Arbitrating issues internal/external to the team
- Tracking all project activities according to the plan
- Ensuring plans, activities, and results are signed off
- Resolving resource issues
- Resolving scheduling conflicts
- Monitoring progress of the team to identify potential issues
- Collaborate with the team to incorporate changes
- Setting and managing expectations of all project levels and stakeholders throughout the project life cycle
- Managing issues with external team resources

This function is not just relegated to the Project Manager. In larger projects where each team member represents a group of people required for project deliverables, those team members perform the above tasks and feed the status reports to the Project Team.

Closure

The final function of the Project Management Process within the Project Life Cycle is where everything comes together to provide the deliverables. It is here that the project is completed, the documentation is completed, the client's perception of expectations are met, milestones have been delivered, and a signoff on the project is completed by the business stakeholders.

The Project Manager during this phase reviews the project plan to actual deliverables:

- Is the project what the client/business stakeholder expected?
- Is it completed on time and within budget?
- Are all the user documentation materials completed?
- Are all the training materials completed?
- Has training been delivered?
- Have all the milestones been met to satisfaction of the business stakeholder?
- Have the expectations of the business stakeholder been met?
- Are there any outstanding issues needing resolution prior to acceptance and completion of the project?
- Is the project ready to be signed off by the team and business stakeholder?

Once the stakeholder has approved of the project and signed off on it, the Project Manager officially releases the project and schedules a Project Closure Review (PCR) meeting:

- What went well?
- What could be improved on?
- What were external issues to avoid next time?
- What were internal issues to be addressed early next time?
- Were there systemic issues, equipment issues, resource issues and how can they be handled for the next project?

Project Methodologies

Across all methodologies

Within the Software Development Life Cycle there are project management methodologies used to facilitate the identification, development, and deliverables of a project. The type and scope of projects are innumerable and the methods used to complete a project are based on management perceptions of benefit to their business and specific operation. There are no right or wrong methods, only those preferred. The best Project Management methodology is the one that gets the best results.

Each methodology has a niche. Developing web-based code may be best accomplished using Agile. Developing a large-scale data warehouse may be best accomplished using the waterfall approach. What usually works best is a combination of different techniques. The methodology used is not about a specific technology either. It's about an approach to the way systems are built and designed to support core business goals.

To understand some of the methods and where they best fit in an organization, a description of each follows:

1. Waterfall – The more traditional project management process used as part of the Systems Development Life Cycle having a sequence of steps where the output of one becomes the input for the next. This is used as part of large-scale product development where teams span cities and countries. This process can be used when your client has a well established infrastructure and where major operational integration occurs. For example, establishing a data mart for multiple business units in a division utilizing legacy systems for data storage.

The Waterfall method focuses on planning detail and the entire process is stepped sequentially through different pre-defined stages. Progress here is measured in terms of deliverables: Requirements Documents, Plan Documents, Design Documents, Test Plans, Code Reviews, etc.

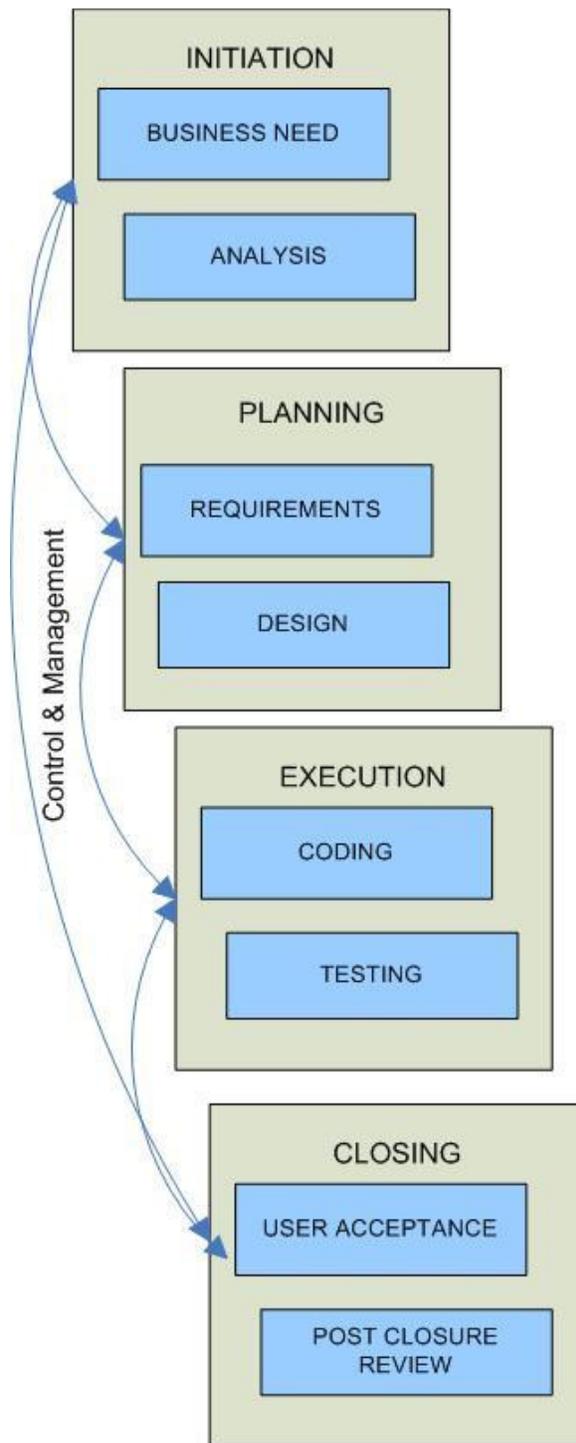


Figure 5-1: Waterfall Methodology

2. Incremental – breaks a project development cycle into smaller increments where each increment is reviewed and accepted before the next one is begun. In this process the initial software concept, requirements analysis, and design of architecture and system core are defined using the Waterfall approach, followed by iterative Prototyping until completion of the final prototype. Each iteration is tested and evaluated by the client/stakeholder who provides input for the next iteration.

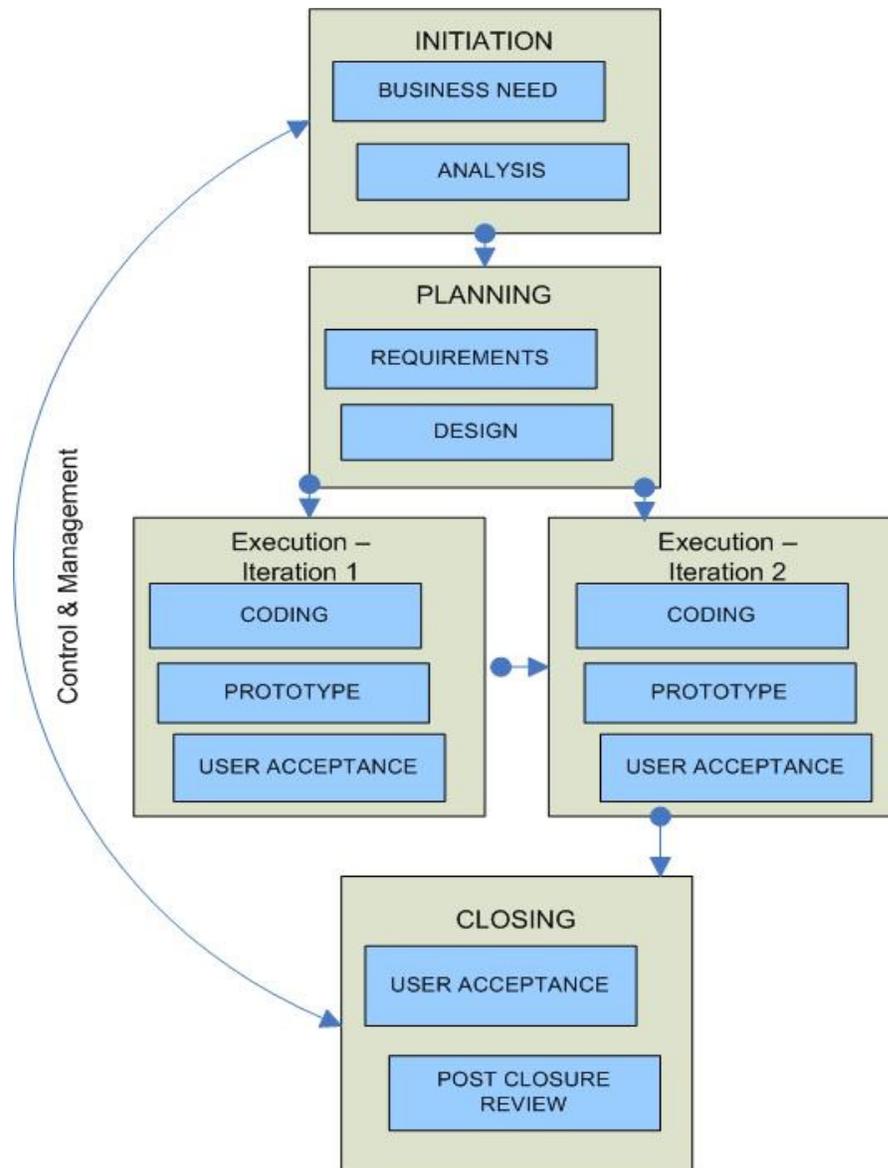


Figure 5-2: Iterative Methodology

3. Agile – is a social network project management process. It is used as part of small-scale product development where team members all sit together. This process can be used when your clients require speed, flexibility, continuous customer design, and where small functionality can be developed and delivered quickly. For example, web design and development based on continuous web-based feedback from the customer base.

Agile is used instead of traditional methods with a repeating cycle of speculate, collaborate, learn iterative approaches. Here iterations occur consisting of brainstorm, develop, feedback, brainstorm, develop, feedback occurs with and between all team members including the customer or stakeholder. Each iteration begins with release planning (analysis and user scenarios identified) and a series of Sprints. Sprints produce a viable release and can be compared to the waterfall method's phase delivery approach.

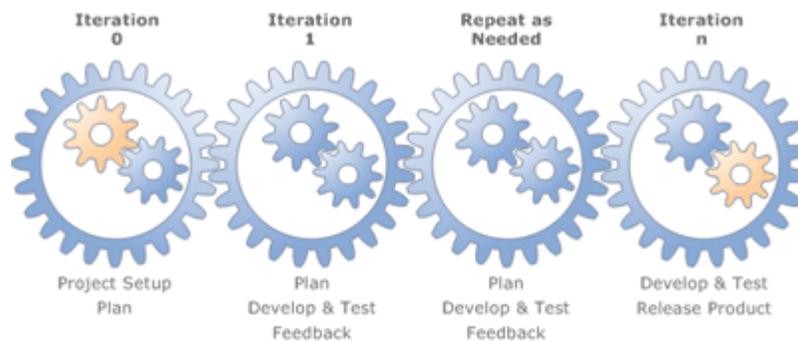


Figure 5-3: Agile Iterative Approach (courtesy of Microsoft's MSF)

4. Rapid Application Development – (RAD) involves iterative development and the construction of production prototypes based on active user involvement. Project control involves the creation and management of “timeboxes” where if the project starts to slip, emphasis is on reducing requirements to fit the timebox/schedule, not in increasing the deadline.

This process is typical when you have one or two software developers working closely with the client/stakeholder where once the work and data process flows are understood, the developers generate a functional product prototype that is continuously improved upon. This process is very quick and requires dedicated commitment from the client/stakeholder.

What is unusual about this process is that the Project Manager usually becomes the facilitator and manages scope to meet specified client timetables. (Since the developer works closely with the stakeholder, it is easy to take a business need and unwittingly expand the project to a massive endeavor requiring more than the initial team members.) The Project Manager ensures that time boxes are consistently met.

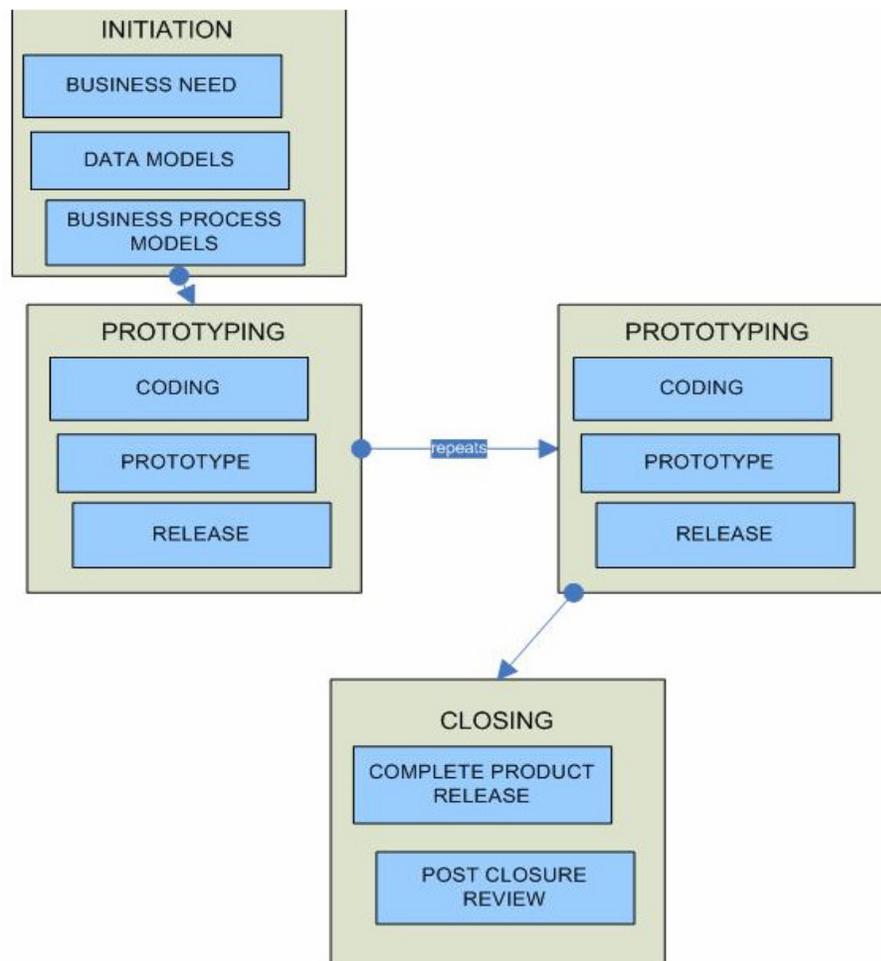


Figure 5-4: RAD methodology

5. Cowboy – design on the fly project management process. Used in small companies where there is one or two developers. This process is excellent when the developer works hand-in-hand with the client and uses his/her knowledge to produce while discussing features and function with the client. For example, google and facebook applications started with a creative idea in which the developer just developed to the idea. This development often occurs spur of the moment based on a conversation or an idea. Development usually is hand in hand with the feedback from the business stakeholder. The business owner/stakeholder actively participates in the prototyping, testing, and integration testing.

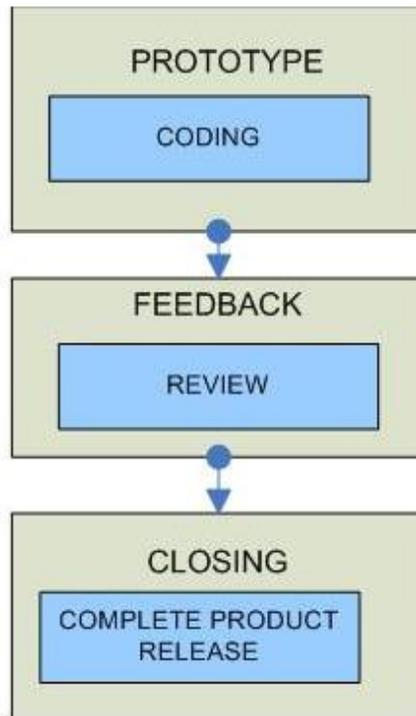


Figure 5-5: Cowboy Method

A lot of Agile proponents lump any software development methodology having to do with short incremental cycle times under the Agile umbrella, however that is a perception. Some of the methodologies existed long before the term Agile was coined. The same can be said for any methodology involving a step-by-step approach and its association with the Waterfall method.

Best practices will determine what methodology is used within a given company. Usually it is the perception and preference of management. Ideally, best practices combine both a detailed and iterative approach.

Today's Project Manager needs to be familiar with Waterfall and Agile methods of the Software Development Life Cycle since their uses are determined by the type of project needing to be performed.