**1. The Top Project Management Methodologies**

Here we take a look at some of the top project management methodologies grouped together by similarity and popularity.

**A. The Traditional, Sequential Methodologies**

**+ Waterfall**

What is the most common way to plan out a project? Sequence the tasks that lead to a final deliverable and work on them in order. This is the Waterfall methodology — the traditional method for managing projects and the one that is simplest to understand. One task must be completed before the next one begins, in a connected sequence of items that add up to the overall deliverable. It’s an ideal method for projects that result in physical objects (buildings, computers), and project plans can be easily replicated for future use.

The power of this methodology is that every step is pre planned and laid out in the proper sequence. While this may be the simplest method to implement initially, any changes in customers’ needs or priorities will disrupt the sequence of tasks, making it very difficult to manage.

**+ Critical Path Method (CPM)**

The critical path method developed in the 1950s is based on the concept that there are some tasks you can’t start until a previous one has been finished. When you string these dependent tasks together from start to finish, you plot out your critical path.

Identifying and focusing on this critical path allows project managers to prioritize and allocate resources to get the most important work done, and reschedule any lower priority tasks that may be clogging up your team’s bandwidth. This way, if changes need to be made to the project schedule, you can optimize your team’s work process without delaying the end results.

**Further Reading:**

* [Critical Path is as Easy as 1-2-3](https://www.wrike.com/blog/critical-path-is-easy-as-123/)

**+ Critical Chain Project Management (CCPM)**

Critical chain project management is a methodology that puts a primary focus on the resources needed to complete the project’s tasks. It begins by building a project schedule and identifying the most crucial tasks that need to be done — the “Critical Chain” — and reserving resource for those high-priority tasks. It also builds buffers of time around these tasks into the project’s schedule, which helps ensure the project meets its deadlines.

**B. The PMI/PMBOK “Method”**

While it may be debatable whether this is a true project management methodology, you will find organizations that say they use the PMI or PMBOK method for managing projects. What this simply means is they break down their projects into the five process groups agreed upon by the Project Management Institute (PMI) and documented in the Guide to the Project Management Body of Knowledge (PMBOK), namely: initiating, planning, executing, controlling, and closing.

Project management purists however insist that PMBOK is not so much a methodology as it is an agreed upon set of standards and conventions for managing projects. A similar analogy is that the dictionary is not a method for creating books, but it collects the agreed-upon vocabulary used to write books.

Read the section [About PMBOK](https://www.wrike.com/project-management-guide/pmbok/)for a deeper discussion on the 5 process groups and the 10 key knowledge areas.

**C. The Agile Family**

After Waterfall and PMI/PMBOK, another popular project management methodology is Agile and the various frameworks with which to implement Agile. Let’s take a look at some of them.

**+ Agile**

The core of the Agile methodology was developed by 17 people in 2001 in written form. Their [Agile Manifesto of Software Development](http://agilemanifesto.org/) put forth a groundbreaking mindset on delivering value and collaborating with customers. Agile’s four main values are expressed as:

* Individuals and interactions over processes and tools
* Working software over comprehensive documentation
* Customer collaboration over contract negotiation
* Responding to change over following a plan

Today, the word Agile can refer to these values as well as the frameworks for implementing them, including: Scrum, Kanban, Extreme Programming, and Adaptive Project Framework.

What is common among the various flavors of Agile? Project objectives are made clear by the customer while the final deliverable can change. The project team works in iterative cycles, always evaluating results at the end. Depending on the results of these evaluations, the final deliverable may be modified in order to better answer the customer’s needs. Continuous collaboration is key, both within the project team members and with project stakeholders.

**Further Reading:**

* [7 Steps to Developing an Agile Marketing Team](https://www.wrike.com/library/ebooks/agile-marketing-guide/) (eBook)
* [Should Your Business Go Agile?](https://www.wrike.com/blog/should-your-business-go-agile-infographic/) (Infographic)
* [8 Attitudes Guaranteed to Sink Your Agile Projects](https://www.wrike.com/blog/8-attitudes-guaranteed-to-sink-your-agile-projects/)
* [The Agile Origins of Project Management 2.0](https://www.wrike.com/blog/the-agile-origins-of-project-management-2-0/)
* [Join the Agile Marketing Revolution!](https://www.wrike.com/blog/join-the-agile-marketing-revolution-infographic/) (Infographic)
* [Agile Project Management vs. Process Oriented: Why not both?](https://www.wrike.com/blog/agile-vs-process-video/) (Video)

**+ Scrum**

Scrum is the most popular Agile development framework because it is relatively simple to implement but also because it solves a lot of problems that software developers have struggled with in the past such as convoluted development cycles, inflexible project plans, delayed production.

In Scrum, a small team is led by a Scrum Master whose main job it is to clear away all obstacles to work getting done more efficiently. The team works in short cycles of two weeks called “sprints,” though the team members meet daily to discuss what’s been done and where there are any roadblocks that need clearing. This methodology allows for quick development and testing, especially within small teams.

**Further Reading:**

* [Fundamentals of the Scrum Methodology](https://www.wrike.com/blog/fundamentals-of-the-scrum-methodology/)
* [Customer’s Tip of the Day: How to Make the Management of Your Freelance Staff More Efficient](https://www.wrike.com/blog/customers-tip-of-the-day-how-to-make-the-management-of-your-freelance-staff-more-efficient/)
* [Scrum in marketing: making enterprises adaptive](https://www.wrike.com/blog/scrum-in-marketing-making-enterprises-adaptive/)
* [Scrum in Wrike: making software development more agile](https://www.wrike.com/blog/scrum-in-wrike-making-software-development-more-agile/)

**+ Kanban**

Kanban is another framework for implementing Agile but is based on a team’s capacity to do work. It originated from the factories of Toyota during the 1940s and was originally a visual system of cards (“kanban”) used by a department to signal that their team is ready for more raw materials, that the team has more capacity to produce.

Today, this visual approach to managing a project is well-suited to work that requires steady output. Project teams create visual representations of their tasks often using sticky notes and whiteboards (though there are also virtual versions that can be used online) and move these through predetermined stages to see progress as it happens and identify where roadblocks occur.

**+ Extreme Programming (XP)**

Extreme programming is another offshoot of Agile and is a methodology designed to improve the quality (and simplicity) of software and the ability of a development team to adapt to customers’ needs. Much like the original Agile formula, XP is characterized by short work sprints, frequent iterations, and constant collaboration with stakeholders. Change can happen within a sprint: if work hasn’t started on a certain feature, it can be swapped out and replaced by a similar task.

**+ Adaptive Project Framework (APF)**

Adaptive Project Framework grew from the view that most IT projects can’t be managed using traditional project management methods, due to uncertain and changing requirements.

Thus APF begins with a Requirements Breakdown Structure (RBS) to define strategic project goals based on product requirements, functions, sub-functions, and features. The project proceeds in iterative stages, and at the end of each stage, teams evaluate previous results in order to improve performance and practices. Stakeholders can also change the project’s scope at the start of each stage in order for the team to produce the most business value.

**D. The Change Management Methodologies**

There are the methodologies that deal with managing projects but with an extra focus on change management especially planning for risks and taking control of change when it happens. Notable methods include:

**+ Event Chain Methodology (ECM)**

The underlying idea behind event chain methodology is that there are potential risks that often lie outside the project’s scope. It’s important to prepare for these risks and plan what to do if they occur. Why? Unexpected events will impact your project’s schedule, deliverables, and potentially its success.

**+ Extreme Project Management (XPM)**

Extreme project management (XPM) is the opposite of Waterfall in that it offers you a way to manage massive change and still move forward to project completion. In XPM, you can alter the project plan, budget, and even the final deliverable to fit changing needs, no matter where the project is. It’s the perfect way to manage projects that have a short timeline of anywhere from a few weeks to mere days.

**Further Reading:**

* [What is Extreme Project Management and is it Right for Your Team?](https://www.wrike.com/blog/extreme-project-management/)

**E. The Process-based Methodologies**

Then there are the project management methods which practically veer into the areas of business process management (BPM) wherein each method focuses on work as a collection of processes. While project management purists may argue that these methods belong on some other list, we argue that these are still quite valid ways to plan for and execute a project plan.

**+ Lean**

Lean is a methodology that is focused on streamlining and cutting out waste. The first step is to create a work process breakdown to identify and eliminate bottlenecks, delays, and all forms of waste (“muda”). The goal is to do more with less: i.e. deliver value to the customer using less manpower, less money, and less time.

**Further Reading**:

* [Product Development Tips from the Wright Brothers](https://www.wrike.com/blog/product-development-tips-from-the-wright-brothers-video/) (Video)
* [5 Lessons in Lean Product Development from the Wright Brothers](https://www.wrike.com/blog/5-lessons-in-lean-product-development-from-the-wright-brothers-infographic/) (Infographic)
* [Startups Should Lean on Lean Project Management](https://www.wrike.com/blog/startups-should-lean-on-lean-project-management/)
* [The 7 Wastes that Cripple Knowledge Workers](https://www.wrike.com/blog/the-7-wastes-that-cripple-knowledge-workers-video/) (Video)

**+ Six Sigma**

Six Sigma is a statistics-based methodology that seeks to improve the quality of a process by measuring the defects or bugs present and getting it down as close to zero as possible. A process can therefore attain a rating of Six Sigma if 99.99966% of the final product — your project deliverable — is defect-free.

**+ Lean Six Sigma**

Combining the minimalist approach of Lean (“no waste!”) and the quality improvement of Six Sigma (“zero defects!”), Lean Six Sigma focuses on eliminating waste so that projects are more efficient, cost effective, and truly answer customers’ needs.

**+ Process-Based Project Management**

Process-based Project Management is a methodology that aligns all project objectives with a company’s larger mission and corporate values. Thus all project goals and tasks remain strategic, and must roll up to the larger corporate objectives. The actual steps involved include: defining the process, establishing metrics, measuring processes, and adjusting objectives when these prove unstable, planning improvements and then implementing them.

**F. The Other Methodologies**

**+ PRINCE2**

PRINCE2 stands for Projects In Controlled Environments. It’s a method for managing projects used by the UK government and characterized by a product-based planning approach. In PRINCE2, high level activities such as setting the business justification and resource allocation are owned by a structured project board while a project manager takes care of the lower level, day-to-day activities such as scheduling. This methodology gives teams greater control of resources and the ability to mitigate risk effectively.

**Further Reading**:

* [PRINCE2 Explained (Project Management Basics)](https://www.wrike.com/blog/project-management-basics-prince2-explained/)

**+ PRiSM**

First off, this is not the surveillance program of the same name initiated by the US National Security Agency. Instead, PRiSM stands for Projects Integrating Sustainable Methods and is a project management methodology that is aimed at managing change while incorporating environmental sustainability into its processes. The goal with PRiSM is to complete projects while reducing a company’s negative environmental and social impact. It is, quite literally, green project management.

**+ Benefits Realization**

From conception to execution to delivery and beyond, the Benefits Realization methodology focuses on whether your deliverable satisfies the benefits the customer is expecting to get from it, not just whether or not a product was delivered on time or within budget. This methodology ensures that you deliver real value to customers and stakeholders.

**Spiral**

The spiral model is a risk-driven software development process model. Based on the unique risk patterns of a given project, the spiral model guides a team to adopt elements of one or more process models, such as incremental, waterfall, or evolutionary prototyping.

Spiral Model is a combination of a waterfall model and iterative model. Each phase in spiral model begins with a design goal and ends with the client reviewing the progress.

The development team in Spiral-SDLC model starts with a small set of requirement and goes through each development phase for those set of requirements. The software engineering team adds functionality for the additional requirement in every-increasing spirals until the application is ready for the production phase.

When to use Spiral Methodology?

When project is large

* When releases are required to be frequent
* When creation of a prototype is applicable
* When risk and costs evaluation is important
* For medium to high-risk projects
* When requirements are unclear and complex
* When changes may require at any time
* When long term project commitment is not feasible due to changes in economic priorities

### Advantages and Disadvantages of Spiral Model

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| --- | --- |
| **Advantages** | **Disadvantages** |
| * Additional functionality or changes can be done at a later stage | * Risk of not meeting the schedule or budget |
| * Cost estimation becomes easy as the prototype building is done in small fragments | * It works best for large projects only also demands risk assessment expertise |
| * Continuous or repeated development helps in risk management | * For its smooth operation spiral model protocol needs to be followed strictly |
| * Development is fast and features are added in a systematic way | * Documentation is more as it has intermediate phases |
| * There is always a space for customer feedback | * It is not advisable for smaller project, it might cost them a lot |

**2. Your Next Action: Choose the Right Project Management Methodology**

With so many different options available, how do you choose the right methodology for your project and your team? You should pick your methodology based on the needs of your project and your team. Two tips are relevant here:

**A. Start With the End in Mind**

Take a look at your requirements, your project goals and objectives. What does your final deliverable need to look like? What benefits should it provide? Some examples:

* If it’s a physical object such as a building or a household product with very definite materials and clear stakeholder expectations, it may benefit from a sequential methodology such as Waterfall or Critical Path.
* If it’s a software product or an app that is not set in stone yet, a flexible Agile methodology may be just what the project needs.
* Is environmental sustainability a core value of the organization and essential to the delivery of your product? Then look at PRiSM.
* Is rapid development of a minimum viable product the most important thing? Then look at one of the process-based methodologies such as Lean or Lean Six Sigma.

**B. Assess What’s Already Working**

But don’t forget to look at the work processes you already have in place that have brought your team success in the past. What kind of work environment does the team excel in?

* If they thrive on collaboration, incorporating new ideas as they work, and even last-minute pivots due to changing needs, then consider methodologies such as Scrum, Kanban, XP, or APF.
* Or do they prefer an orderly, structured plan that accomplishes tasks sequentially? Then look at methodologies such as Waterfall, Critical Path, and Critical Chain Project Management.

**Need More Help? Grab the Ebook:**

* [The Beginner’s Guide to Project Management Methodologies](https://www.wrike.com/library/ebooks/pm-methodologies/): Download our free ebook that digs into the pros and cons of 16 top project management methodologies.