



Project Management

Project Proposal & Planning



Benefit/Cost Ratio

- Cost/Benefit Ratio, as the name suggests, is the ratio between the Present Value of Inflow or the cost invested in a project to the Present Value of Outflow, which is the value of return from the project.
- Projects that have a higher Benefit-Cost Ratio or lower Cost-Benefit Ratio are generally chosen over others.



Scoring Model in Project Management

- The scoring model in project management is an objective technique: the project selection committee lists relevant criteria, weighs them according to their importance and their priorities, then adds the weighted values.
- Once the scoring of these projects is completed, the project with the highest score is chosen.



Payback Period

- **Payback Period** is the ratio of the total cash to the average per period cash. It is the time necessary to recover the cost invested in the project.
- The Payback Period is a basic project selection method. As the name suggests, the payback period takes into consideration the payback period of an investment.
- It is the time frame that is required for the return on an investment to repay the original cost that was invested.
- The calculation for payback is fairly simple:

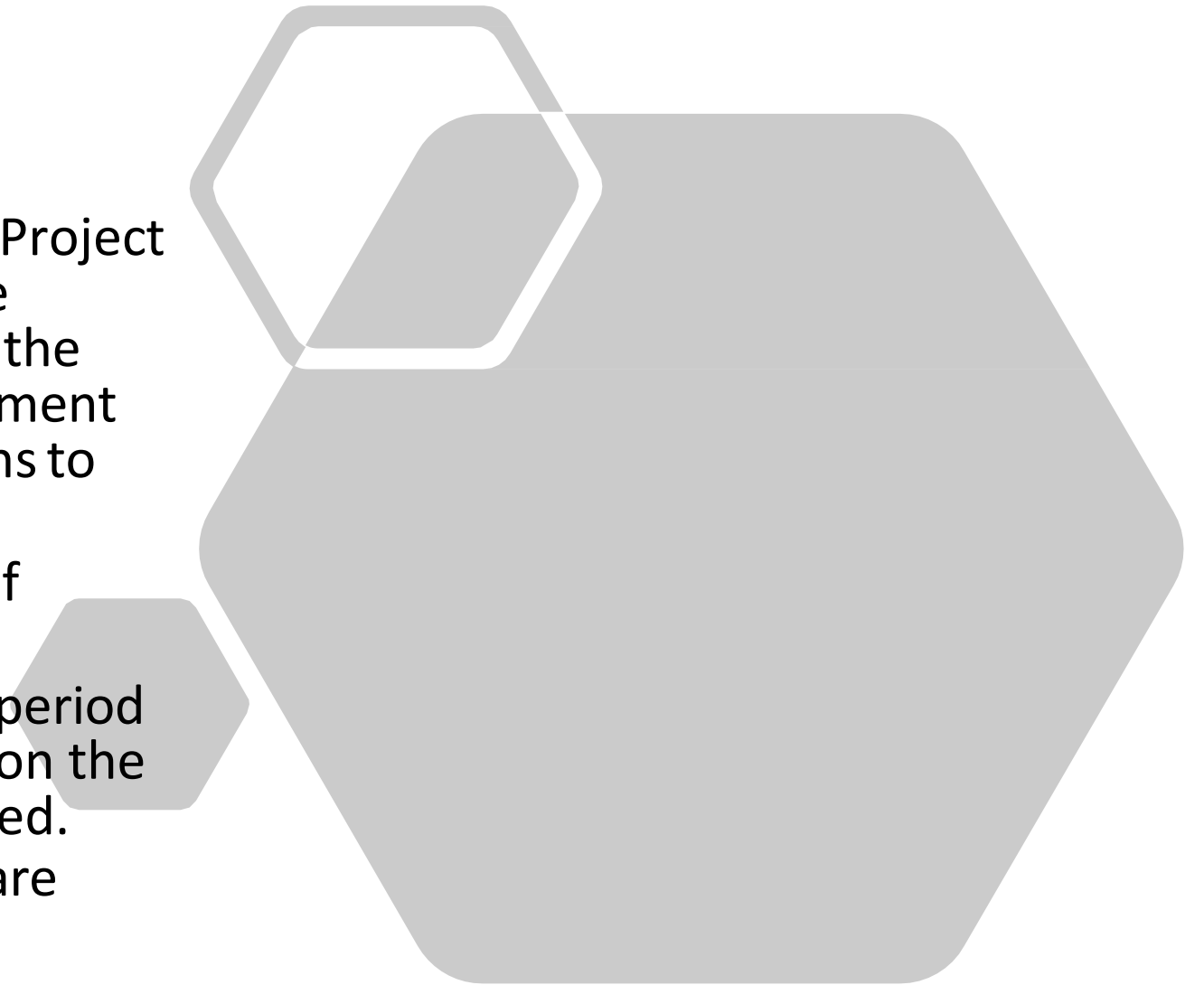


FORMULA

$$\text{Payback Period} = \frac{\text{Cost of the Project}}{\text{Average Annual Cash Inflows}}$$

Payback Period

- When the Payback period is used as the Project Selection Method, the project that has the shortest Payback period is preferred since the organization can regain the original investment faster. There are, however, a few limitations to this method:
 - It does not consider the time value of money.
 - Benefits accrued after the payback period are not considered; it focuses more on the liquidity while profitability is neglected.
 - Risks involved in individual projects are neglected.



Net Present Value

- Net Present Value is the difference between the project's current value of cash inflow and the current value of cash outflow.
- The NPV must always be positive. When picking a project, one with a higher NPV is preferred.
- The advantage of considering the NPV over the Payback Period is that it takes into consideration the future value of money.
- However, there are limitations of the NPV, too:
 - There isn't any generally accepted method of deriving the discount value used for the present value calculation.
 - The NPV does not provide any picture of profit or loss that the organization can make by embarking on a certain project.

Discounted Cash Flow

- A discounted cash flow (DCF) analysis allows you to estimate the money your company would receive from an investment or project, adjusted for the time value of money.
- The time value of money presumes that a dollar today is worth more than a dollar tomorrow because you have invested it.
- It's well-known that the future value of money will not be the same as it is today.
- For example, \$20,000 won't have the same worth ten years from now.
- For instance, with a 5% annual interest rate, \$1 in a savings account will be worth \$1.05 after a year. Likewise, if you delay a \$1 payment for a year, its present value is 95 cents, as you can't transfer it to your savings account to earn interest.

Internal Rate Of Return

- The Internal Rate of Return is the interest rate at which the Net Present Value is zero—attained when the present value of outflow is equal to the present value of inflow.
- Internal Rate of Return is defined as the “annualized effective compounded return rate” or the “discount rate that makes the net present value of all cash flows (both positive and negative) from a particular investment equal to zero.”
- The IRR is used to select the project with the best profitability; when picking a project, the one with the higher IRR is chosen.
- When using the IRR as the project selection criteria, organizations should remember not to use this exclusively to judge the worth of a project; a project with a lower IRR might have a higher NPV and, assuming there is no capital constraint, the project with the higher NPV should be chosen as this increases the shareholders' profits.

Opportunity Cost

- Opportunity Cost is the cost that is given up when selecting another project.
- Opportunity costs refer to alternative benefits the company may realize when choosing one alternative over another.
- Putting opportunity costs into consideration allows you to weigh the benefits from alternative courses of action and not just the current choice or path being considered in the cost-benefit analysis.
- During project selection, the project that has the lower opportunity cost is chosen.

What's the DCF?

- The DCF is a financial model and can be viewed as the primary tool in valuation that is used to estimate the **intrinsic value** of any asset that generates cash flows. The key proposition within the DCF is that the value of an asset is the present value of its future cash flows:

$$DCF = \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \dots + \frac{CF_n}{(1+r)^n}$$

- The formula above shows that according to the DCF, any asset's value is equal to the sum of all cash flows (CF) in each period t divided by $1 +$ the discount rate (r) to the corresponding period t .

What's NPV?

- The net present value (NPV) is the present value of all future cash flows within the DCF adjusted by the initial investment that had to be made in the first place. In other words, NPV is the difference between the initial investment costs and the present value of the asset:

$$NPV = \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \dots + \frac{CF_n}{(1+r)^n} - \text{Initial Investment}$$

- The result of computing the NPV can either be positive or negative: The initial investment costs to fund a given project/investment can either be lower or higher than its present value. Any NPV that is positive (>0) shows that there is excess value that can be made from the investment/project. This is why companies often use the NPV metric to determine whether a project is worth the investment or not.

Example: Jane's Flowers

- Let's suppose that a local business called Jane's Flowers wants to decide whether it should invest in a project, in which they expand their product line into the dried flower business. For simplicity, let's further assume that Jane's Flowers expects that the project will generate \$1000 in cash flows each year for the next 10 years. By using a **cost of capital** of 10%, we could discount the cash flows respectively to arrive at the total present value:

$$6,144.57 = \frac{1000}{(1 + 0,1)^1} + \frac{1000}{(1 + 0,1)^2} + \dots + \frac{1000}{(1 + 0,1)^{10}}$$

- As a result of our DCF, the total project would be worth \$6,144.57 today.

Example: Jane's Flowers

- Suppose that the project costs an upfront investment of \$8,000 to be carried out. \$8,000 is obviously more than \$6,144.57 which means that the project isn't really worth the investment. The NPV, in this scenario, would be -\$1,855.43:

$$-1,855.43 = \frac{1000}{(1 + 0,1)^1} + \frac{1000}{(1 + 0,1)^2} + \dots + \frac{1000}{(1 + 0,1)^{10}} - 8000$$

- Therefore, according to our estimates, expanding the product line to include dried flowers would be a poor choice because it would actually lose us money (NPV is < 0).

DCF vs NPV

- The DCF is the general approach of estimating the value for any investment based on its remaining lifespan, the magnitude of cash-flows it produces, and the risk around generating those cash flows. NPV, on the other hand, is a metric that can be computed in order to quickly determine whether a given project is worth the investment or not.
- The process of discounting cash flows and calculating the net present value can come in very handy in many financial decisions which is why it is commonly used in corporate decisions, financial analysis, and investment valuations.

What is a Project Proposal?

- *A project proposal is a document that describes a proposed project and its purpose, outcomes, and the steps that will be taken to complete the project. Not to be confused with a project contract, which is the formal agreement between two parties to complete a project, a project proposal's purpose is to communicate how a company, team, or individual plan to approach a project.*



What is a Project Proposal?

While the actual elements of a project proposal differ depending on the project itself, there are several key elements of a project proposal, including:

- **Project Background:** What problems, challenges, or opportunities exist that create a need for this project?
- **Objectives:** What are the intended outcomes of this project?
- **Project Scope:** What are the steps or stages of the project? What elements are included in this project? How will the objectives be reached through this project?



Why is a Project Proposal Important?

- The purpose of a project proposal is to describe services and outcomes from a potential service provider so decision-makers can compare vendors and pick the best provider for their needs. It should be considered a sales document that persuades the decision-maker or stakeholder that the prospective provider has the skills and expertise needed to complete the project to their satisfaction.



Why is a Project Proposal Important?

It should also set expectations, detail budget and timeline, as well as set expectations for what delivery would look like.

- **Improved Vendor Comparison**

One of the most important purposes of a project proposal is to allow decision-makers to more objectively compare vendors. With a project proposal, decision-makers can compare prices, processes, and projected outcomes. If there are price differentiations, the decision-maker can also see what aspects of service may differ to create the difference in price. This detailed information helps decision-makers make more informed and objective vendor decisions.

- **Project Understanding**

A project proposal outlines the purpose and scope of a project. This is helpful before a project takes place since it ensures both parties agree about what the project itself will include. It states to the decision-maker or stakeholder that the service provider understands the scope of the project. This helps establish trust between the parties to facilitate a transactional agreement.

Why is a Project Proposal Important?

- **Establish Credibility**

A project proposal should be seen as a sales tool that helps establish credibility. It should communicate to the decision-maker or stakeholder that the service provider is capable of completing the project and fulfilling expectations. This is done by detailing how the project will be completed. The project proposal may also include potential risks or complications and how the service provider would overcome those challenges.

- **Propose an Estimated Timeline & Budget**

A project proposal also proposes a timeline and budget for the project. While this document is not a formal contract, it provides stakeholders enough information about budget, timeline, and outcomes to determine whether or not to move forward with a project and, if so, to make an informed contractor or vendor decision.

Why is a Project Proposal Important?

- **Set Expectations**

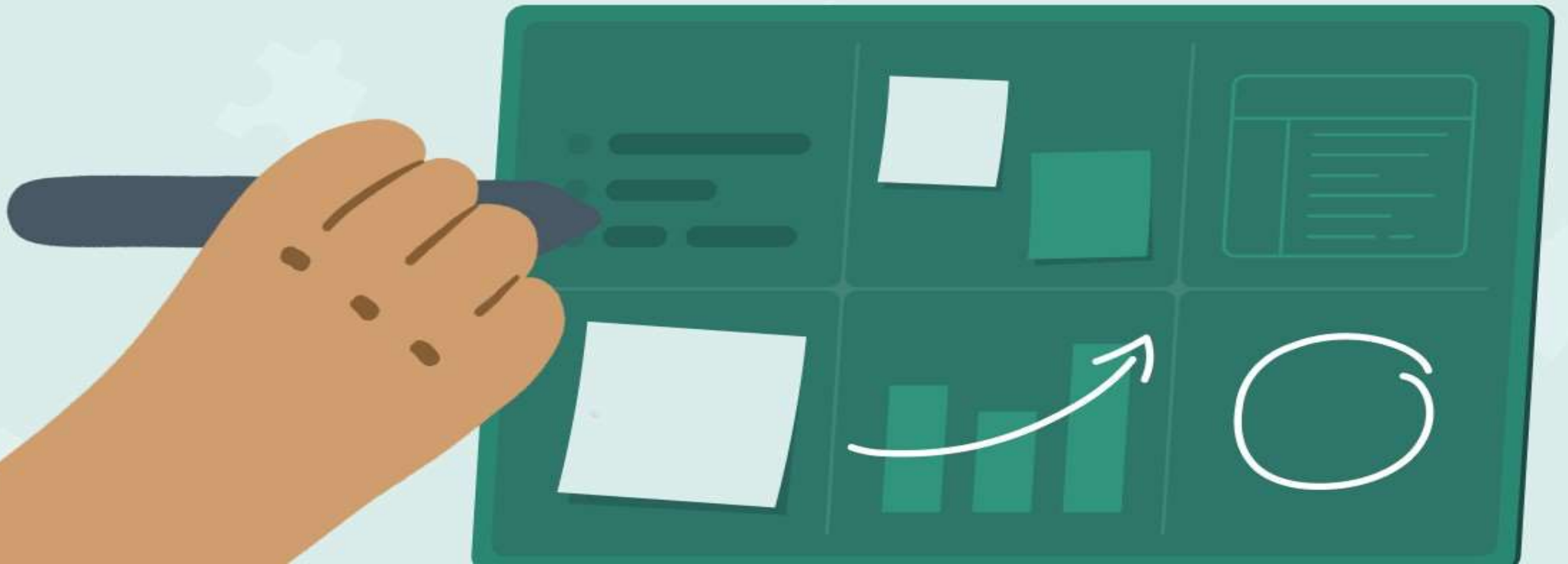
In addition, a project proposal also sets expectations for the client relationship. This includes having a mutual understanding of deliverables, timelines, and budget. While the project proposal is not a contractual agreement, it does set a preliminary agreement that the details in the project proposal will be put into the contract if the project moves forward.

- **Inform Project Planning**

Finally, a project proposal also helps to inform project planning. Once the project is approved, this document will be used to finalize timelines and budget for the contract as well as to complete resource scheduling.



Project plan



What is a project plan?

A project plan is a formal document that contains all planning decisions, approved project scope, and costs.



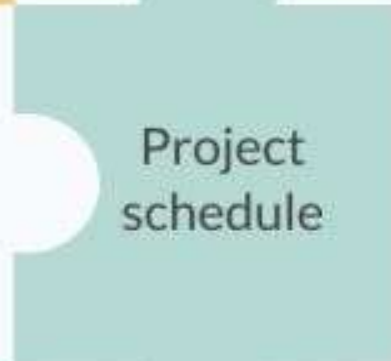
Project Planning

Project planning is the process of defining the scope, objectives, and ways in general to achieve them. This process goes before a plan as it is here where everything is discussed. All crucial planning points and outputs then make up a plan.





Project planning



Project Plan Purpose

A well-prepared plan should address and consequently answer the following questions:

- **Why?**

This question is about the reasons why a project is sponsored and the problem it addresses.

- **What?**

This is about the scope, task and activities of a project to be undertaken.

- **Who?**

This is about involved people, their roles and responsibilities as well as the way they are supposed to be organized.

- **When?**

It is about the project's schedule/timeline.

- **Where?**

It is about the project's location.

- **How?**

It is about the project's methodology / approach and steps to do tasks.





What should a project plan include?

It is worth noting again that there are no identical plans. However, there are standard components that such a plan should include:

- **A vision** (executive summary) – a brief description that describes all goals and objectives of the project.
- **Details about the context:** is it a new project, or does it build on previous experience?
- **A description of the target audience** with the project's desired unique selling point (USP) to the customers.
- **Roles and responsibilities** – information about all individuals involved in the design and delivery of the project.
- **Communication strategy.**



What should a project plan include?

- **Project timelines** – tasks put into a sensible order accompanied by sufficient timescales and start and end dates.
- **Core tasks and deliverables** that are required to achieve the objectives.
- **Resources** necessary to reach the goals, including people, organizations, real and virtual resources, etc.
- **Budget and costs.**
- **A contingency plan** where all risks should be assessed.
- **A document management system.**
- **Legacy** – the intended legacy of the project. For example, work towards a sustainable activity.



Subsidiary management plans

- Thorough planning can make your life easier during the project execution phase by preventing misunderstandings and nasty surprises. That is why it is crucial to consider incorporating some subsidiary plans.
- You may logically ask “How many subsidiary plans make up the project management plan”? It depends on every single situation.



Subsidiary management plans

No matter whether you are an experienced project manager or a newcomer, you will definitely need the following subsidiary plans in project management for:

- Schedule management.
- Scope management.
- Resource management.
- Quality management.
- Cost management.
- Communications.
- Risk management.
- Change management.
- Stakeholder engagement.
- Procurement.



Project plan vs. project management plan

Both plans refer to two different concepts and differ in many ways, although many companies use both terms as synonymous.



Project plan vs. project management plan

- **A project plan** is a higher-level plan. This is a visionary document that has a low level of detail. It provides the vision of what the project steps will be like and all the details are accompanied by the “what” question.
- **A project management plan** is an execution document with a high level of revitalization. This doc typically provides a complete picture and executes the vision of the plan. All the details go with the ‘how’ question.





Project plan

- A visionary doc with a higher level of planning
- Provides a low level of details
- The key question is “What”
- Describes the vision of what the project steps will look like

Project management plan

- An execution doc with a lower level of planning
- Provides a high level of details
- The key question is “How”
- Describes a complete picture and the global vision of the project plan

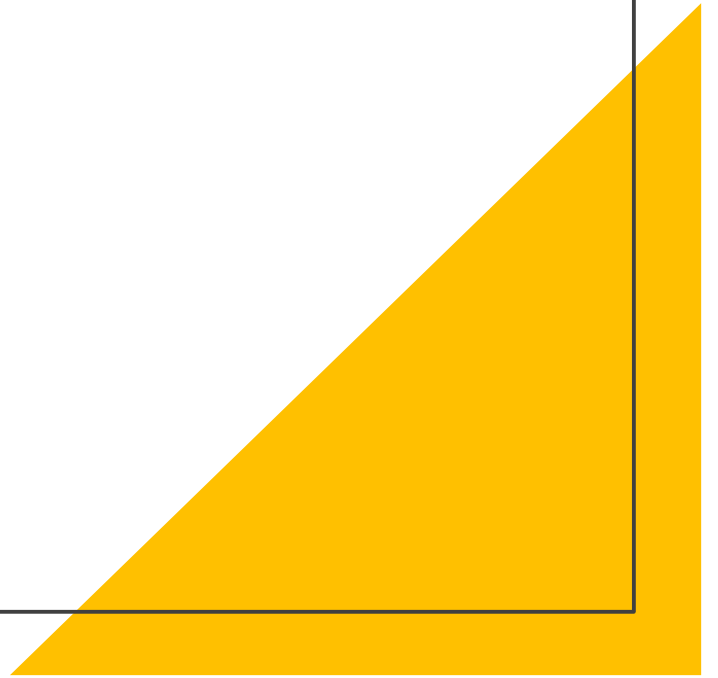


Project plan vs. project management plan

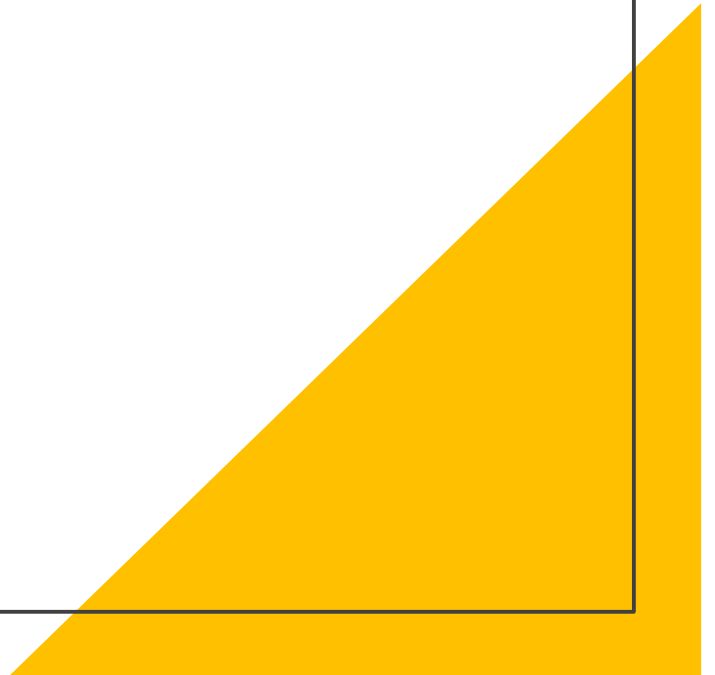
Sometimes, these two terms can be merged for small projects. In larger projects, they should be divided to refer to different concepts.



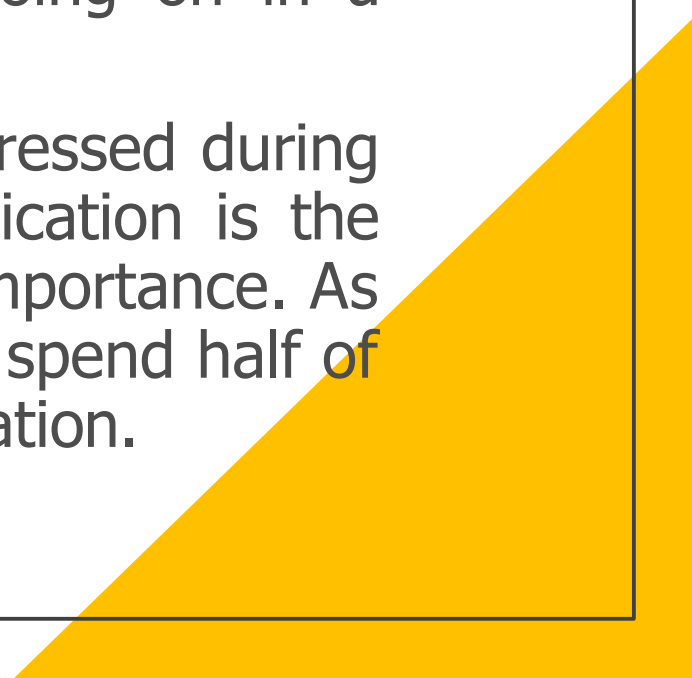
How to create a good project
management plan?



Starting a new plan, a manager should be aware of several questions and the ways to answer and solve them. Each question can be singled out and minded. But there are some common patterns where they can be referred to. There is need to distinguish what goes into a project plan and what a manager should do while thinking about the steps in project planning.

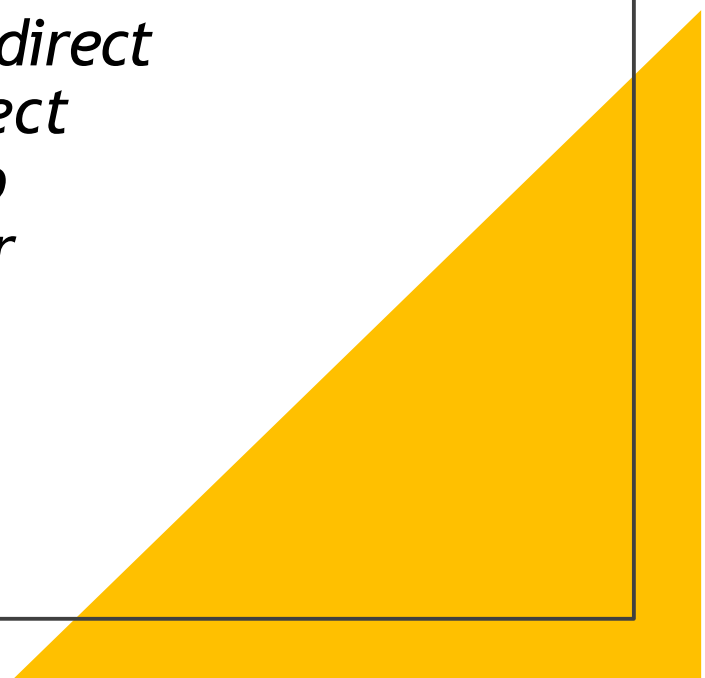


1. Communicate

- Successful planning should start with communication with a team about goals, participants, tasks, etc. A manager should know best who will be responsible for any given task, be aware of deadlines and always stay in touch with everything that is going on in a project.
 - Moreover, this step of project planning should be addressed during the full project implementation. Remember, communication is the key to successful management, and do not doubt its importance. As per **Project Management Institute**, 80% of employees spend half of their workweek on “rework” caused by poor communication.
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2. Identify stakeholders and determine goals

Sometimes there are so many stakeholders that it gets difficult to be aware of everyone. Moreover, they can be direct or indirect with more or less significant impact on a project respectively. That's why it is crucial to identify those who directly influence a plan and then seriously consider their needs.

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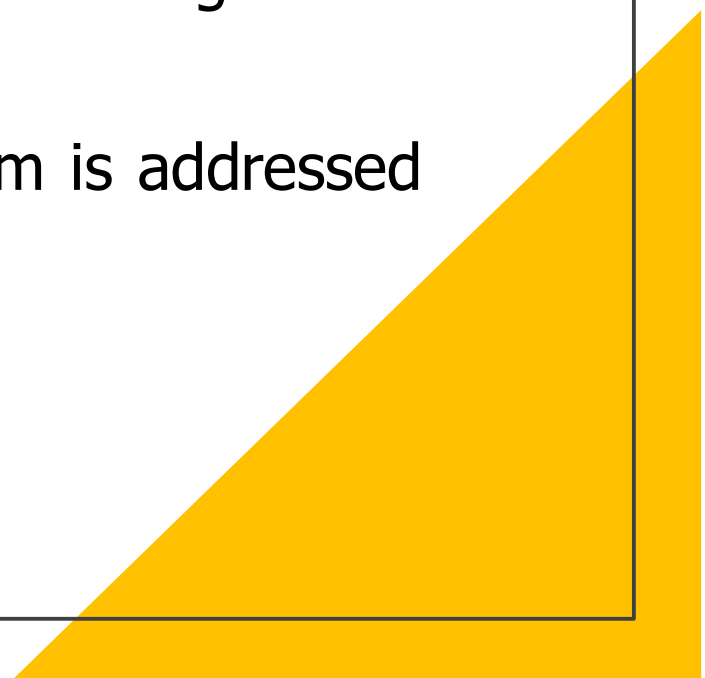
2. Identify stakeholders and determine goals (Cont)

Who can be a stakeholder?

- **A sponsor** – an individual who funds the whole project and approves it.
- **A project manager** – an individual who directly does planning with the following creation, execution, and control.
- **A team** that creates end product. They participate in many crucial aspects like development, quality, design issues, etc.
- **End users** who actually use the end product.

This can be a long list of people who participate in a project: risk analysts, procurement specialists, etc.

2. Identify stakeholders and determine goals (Cont)

- What can be done here? Conduct interviews with key stakeholders. It will help to realize the requirements and goals that have to be achieved. The easiest way to manage and achieve objectives (goals) is to use a Smart technique for goal setting.
 - During interviews, a manager realizes what problem is addressed by the project and why it is actually sponsored.
 - This is our WHY question.
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What are SMART goals?

SMART (S.M.A.R.T.) is an acronym formed by the first letters of words:

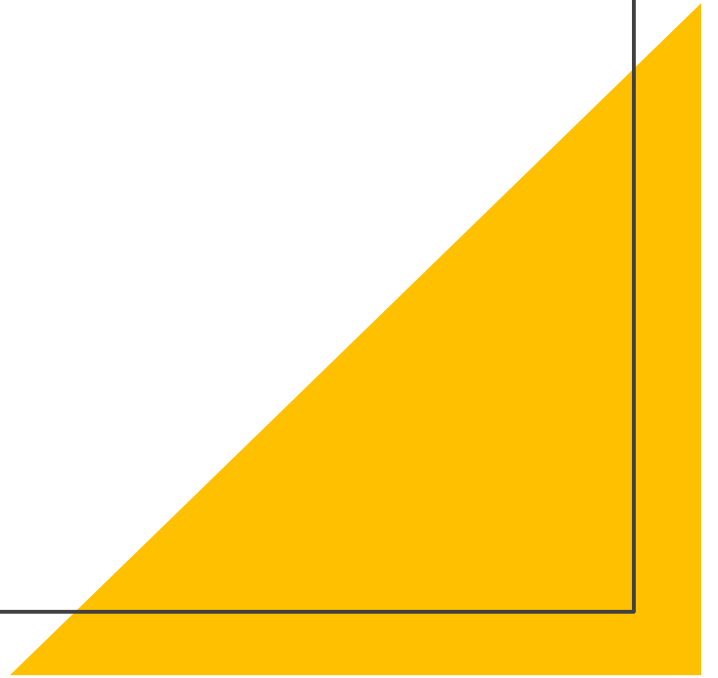
S = Specific,

M = Measurable,

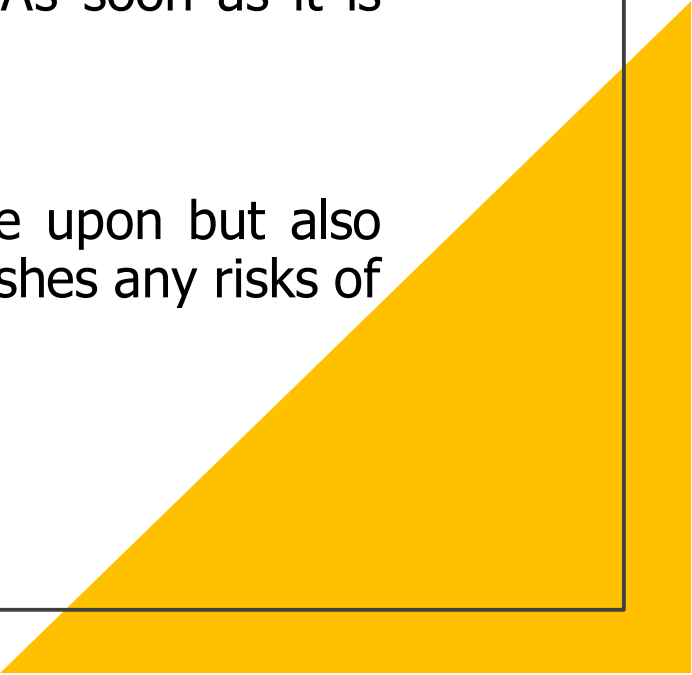
A = Achievable/Attainable,

R = Relevant/ Realistic/ Results Focused,

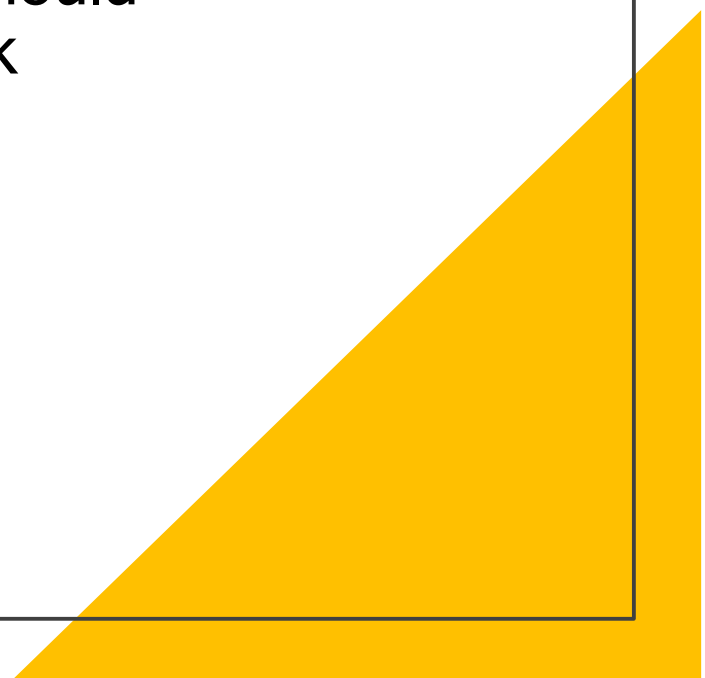
T = Timely/ Trackable.




3. Define a project scope

- This is the most important stage among the other project planning steps. The plan basics are pointed out and discussed here: justification, product description, acceptance criteria, objectives (deliverables), exclusions, constraints, assumptions, cost estimates, and some others. All direct and indirect stakeholders should come to a complete understanding and agreement during this stage. As soon as it is accomplished, all those points make up a project scope statement.
 - As a result, this step implies not only crucial moments to agree upon but also establishes good communication between stakeholders and diminishes any risks of misunderstandings that may lead to scope creep.
 - This is our WHAT question.
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4. Define roles and responsibilities


- When we speak about a project team, a PM's duty is to assign tasks to everyone involved. Team members should know their roles and set of responsibilities. Each task should have a definite number of participants.
 - This is our WHO question.
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5. Schedule a project

- This is the continuation of the previous point. As soon as a manager defines roles and responsibilities for team participants, the next step in a project plan and in a project management plan is to set work duration for each resource with start/end dates.
 - This is our WHEN question.
 - Moreover, here managers set milestones and critical paths – to say in general, this is work with a timeline.
 - Thus, we are approaching the next point – what software to use for project scheduling.
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6. Visualize a project plan with a Gantt chart

GanttPRO is an effective online Gantt chart maker for scheduling timelines. With this app, a manager can:

- Create tasks and assign them to team members.
 - Set duration with start and end dates for each task.
 - Set dependencies between events. A manager tracks all actions and knows where one event comes to an end and gives a start to the other action.
 - Track the progress of each task and the whole project.
 - Identify resources needed for each task.
 - Define the cost for each resource.
 - Collaborate with team members and view all changes made by them.
 - Follow milestones – any significant events that can't be lost as they have a direct impact on a plan.
 - Enable a critical path – the shortest time needed for project completion.
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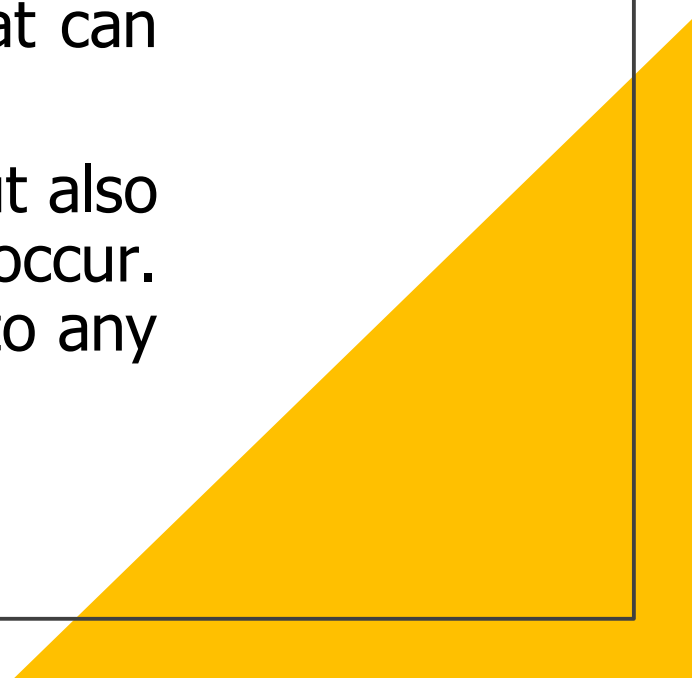
[Timeline](#) Board List Workload Time log People

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🔄 Filter Zoom: Days 📏 📄 View

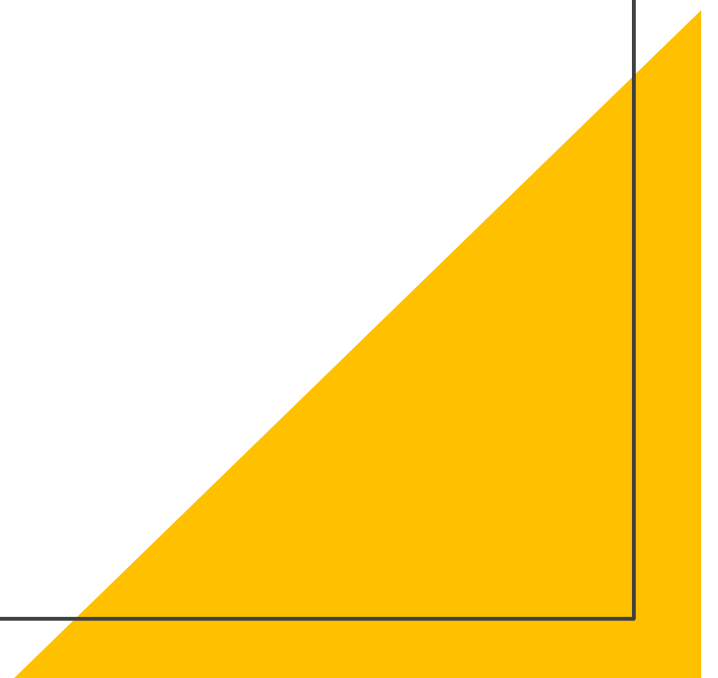


7. Manage risks

- Project management consists of risk management – it is one of the most critical planning steps. Almost no stage in this complicated sphere can go without risks. Therefore, it is highly recommended to define what can go wrong on every step.
 - An experienced manager not only assesses risks but also creates plans of how to handle them in case they occur. Their team should also know the possible reaction to any changes.
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7. Manage risks (Cont)

What risks can occur?

- Too optimistic expectation about time and cost.
 - Unclear requirements and needs.
 - Unclear roles and responsibilities.
 - Changes in requirements.
 - New requirements.
 - Budget cuts.
 - Poor communication.
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Stick with it

There are no two identical projects. One can be perfect with no risks and delays; the other can fail even with the same sponsors, project managers, and teams, costs, timelines, and deliverables. Plans will change, risks will occur. But what will ease planning is a detailed project scope, schedule, good teamwork, and assessed risks - this is supposed to be in a solid and, at the same time, simple project management plan. Then even such challenging things can bring fun and joy.



Thanks