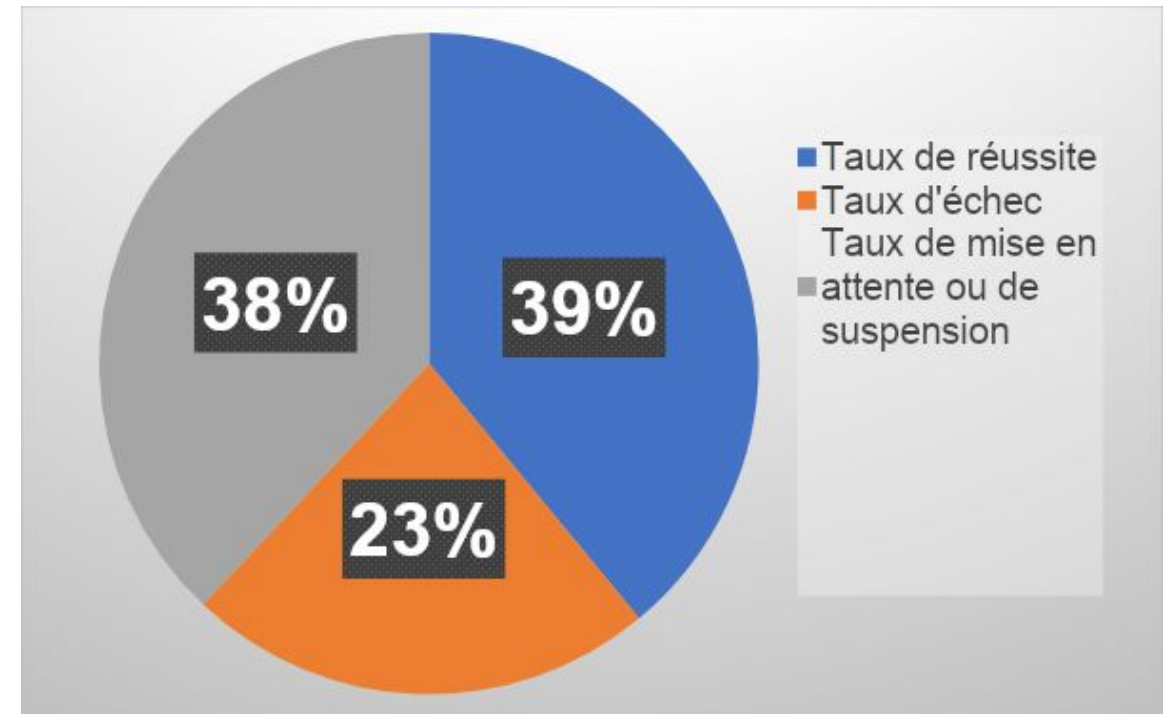


The fundamentals of project management

The fundamentals of project management

According to the Standish Group's CHAOS report - for the year 2020 - the success vs. failure rates for enterprise projects were as follows:

- Success rate: 39
- Failure (abandonment) rate: 23
- Put on hold or suspension rate (late or over budget): 38%.



<https://www.standishgroup.com/about>

Why do barely 40% of projects end up meeting the original specifications?

The fundamentals of project management

There are many factors leading to the success or failure of a project

Some of the factors leading to failure :

- Lack of management support
- Unclear or changing objectives
- Inadequate resources
- Ineffective communication
- Lack of regular monitoring and control
- Poor risk management
- Unrealistic or disproportionate objectives

Some of the success factors :

- Management commitment
- Clear, achievable objectives
- Competent, diverse team
- Effective communication
- Sound planning, rigorous monitoring & continuous evaluation of progress
- Proactive risk management
- Stakeholder commitment
- Flexibility and adaptability of the project team

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1# The fundamentals of project mode



- a) Definition and characteristics
- b) What is a project?
- c) What is project management?
- d) From project mode to project methodologies
- e) A few invariants of project management
 - a constrained implementation framework
 - phasing of activities

The fundamentals of project mode



"A project is a single process consisting of a set of coordinated and controlled activities, with start and finish dates, undertaken with the aim of achieving an objective that conforms to specific requirements such as time, cost and resource constraints"

ISO 10006.2003 definition.

In short, a project is :

- a one-off, unique, non-repetitive action,
- limited in time with a start and end date,
- aimed at a specific, identified objective,
- within a given framework (achieving the objective while controlling the quality of the finished product, costs and deadlines),
- with the mobilisation of multiple and complementary skills.

The fundamentals of project mode How do you move from an initial abstract and complex objective to a set of components that can be organised and controlled?

*"The aim of project management is to **organise**, **supervise** and **manage** all the phases of a project, ensuring that deliverables are produced within the limits of available resources and in line with stakeholder expectations.*

- Source AFNOR



The fundamentals of project mode

Diverse methodologies to respond to different contexts

There are many project management methodologies, each offering structured frameworks for planning, executing and controlling projects.

Traditional approaches

Cascade method: a sequential approach that divides the project into distinct, linear phases. Each phase is generally completed before the next begins. Suitable for projects where the requirements are stable and clearly defined from the outset.

V-method: a variant of the cascade method, with the emphasis on validation and verification at each stage. It emphasises the validation and verification of each stage.

Star method: suitable for product development projects, where specialist teams work simultaneously on different parts of the project before integrating them at the end.

Agile approaches

Scrum or Kanban method: the emphasis is on flexibility and continuous adaptation. Projects are divided into short iterations called "sprints", during which specific parts are iteratively developed, tested and delivered.

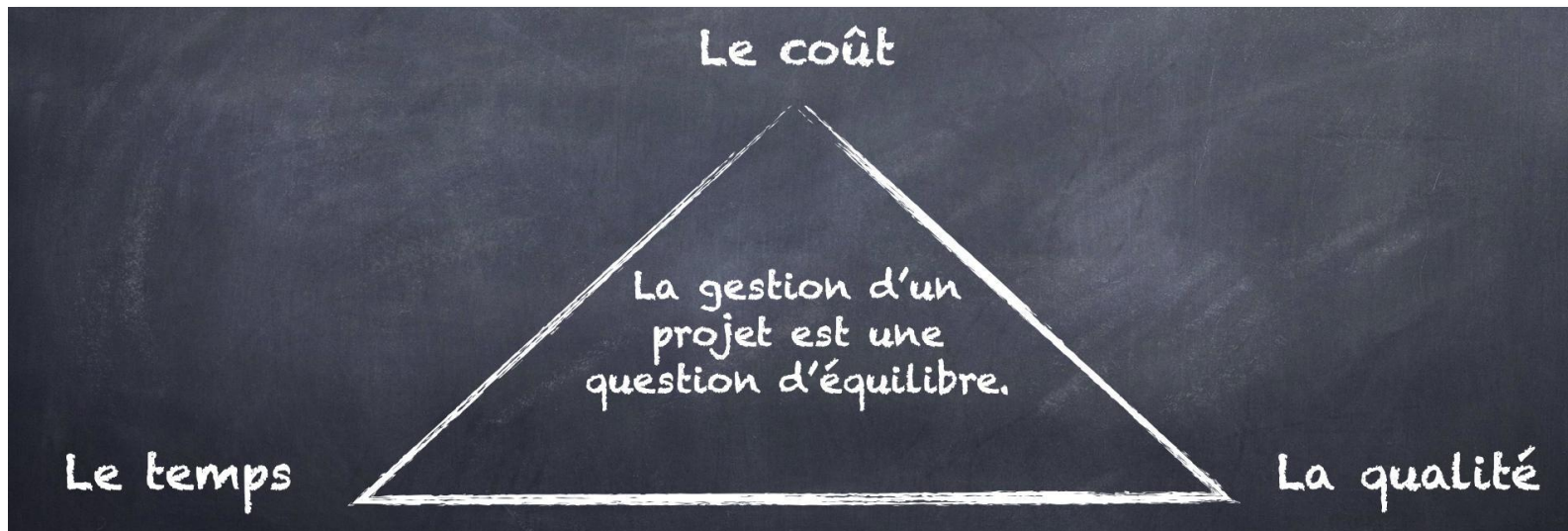
RAD (Rapid Application Development) method: aims to speed up the development process by using prototypes and iterations to rapidly create functional versions of the product.

Incremental method: the project is divided into several parts, each adding new functionality to the product. This allows for more frequent deliveries and greater flexibility.

These methods are just a few examples among many others. Each has its own characteristics and advantages, and the choice depends on the nature of the project, the needs and culture of the organisation.

The fundamentals of project mode Whatever the execution methodology, a project has to operate within a framework of constraints

Mastering project management is a question of balancing 3 basic constraints.



This balance is based on a process of regular prioritisation according to the project's stakes and priorities.

From the outset, the project team must agree with management on the degree of flexibility granted to each of the elements. What is negotiable and what is not?

The fundamentals of project mode

Projects follow a life cycle made up of several distinct phases

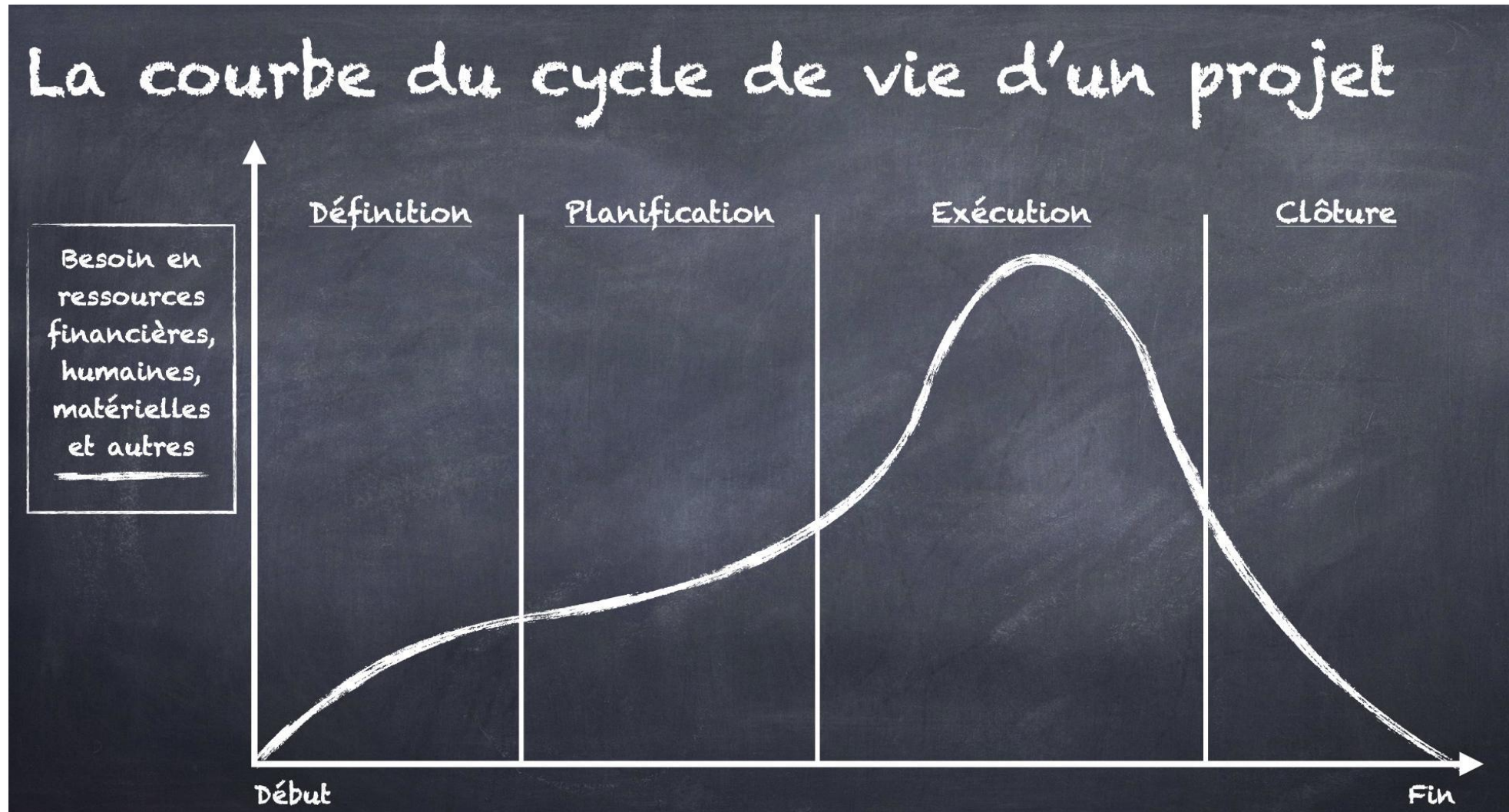
The five generic phases commonly recognised in project management :

1. **Initiation/definition:** this phase involves defining the project. Objectives, stakeholders and resources are identified. This phase justifies the launch of the project.
2. **Planning:** this phase involves the creation of a detailed plan. Tasks, deadlines, resources and risks are planned.
3. **Execution:** this phase consists of implementing the established plan. Resources and tasks are managed in accordance with the plan. Good coordination of resources is key.
4. **Monitoring and control:** controlling activities to ensure that the project is progressing according to plan. Progress and variances are monitored and adjustments are made.
5. **Closing:** Once the objectives have been achieved, the closing phase involves validating the deliverables and communicating the results. The project is officially closed.

These phases are not necessarily linear and can sometimes be iterative, involving backtracking or adjustments as the project progresses.

The fundamentals of project mode

Projects follow a life cycle made up of several distinct phases



2# Preparing a project

- a) The pre-project phase: assessing the opportunity & qualifying the objective
 - i. A few elements to deepen the need & qualify the objective

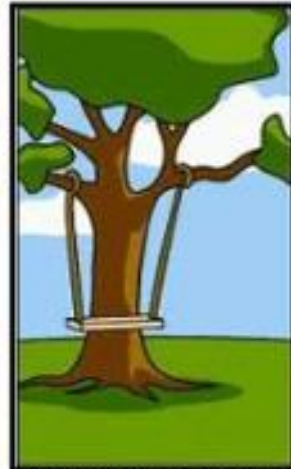
- b) The scoping phase: Subdivision and planning of tasks, deadlines, resources and risks.
 - i. Analysis of stakeholders, formalisation of their roles & definition of governance
 - ii. Detailed subdivision of tasks & production of the provisional schedule
 - iii. Risk analysis & contingency planning
 - iv. Project launch via kick-off meeting

Preparing a project

It's not always easy to define the objective accurately



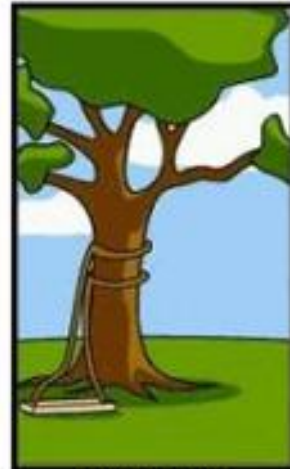
Comment le client a exprimé son besoin



Comment le chef de projet l'a compris



Comment l'ingénieur l'a conçu



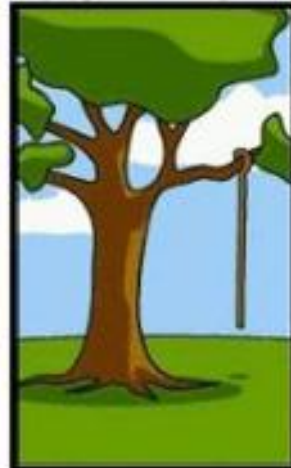
Comment le programmeur l'a écrit



Comment le responsable des ventes l'a décrit



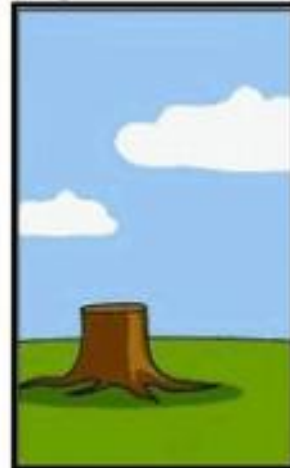
Comment le projet a été documenté



Ce qui a finalement été installé



Comment le client a été facturé



Comment la hotline répond aux demandes



Ce dont le client avait réellement besoin

Preparing a project

It's not always easy to define the objective accurately



How to justify and qualify a project

- **Context and reasons:** what justifies this project? Aims: what is the meaning of the project, its raison d'être, the general need it is intended to meet?
- **Interests:** what should the project achieve? what will it save?
- **Objectives:** what are the main results expected from the project?
- **Criteria for success:** what can be said at the end of the project that it has been a success?
- **Constraints:** what constraints (deadlines, costs, etc.) must be respected?
- **Limitations:** what aspects were excluded from the project? What aspects did it not cover?

Preparing a project

A project brings together an ecosystem of players whose influences need to be controlled.

Stakeholder analysis is a crucial process at the start of a project, as it enables us to understand who the stakeholders involved are, what their expectations are, what their interests are and what influence they have on the project.

Stakeholder analysis will be a success factor for :

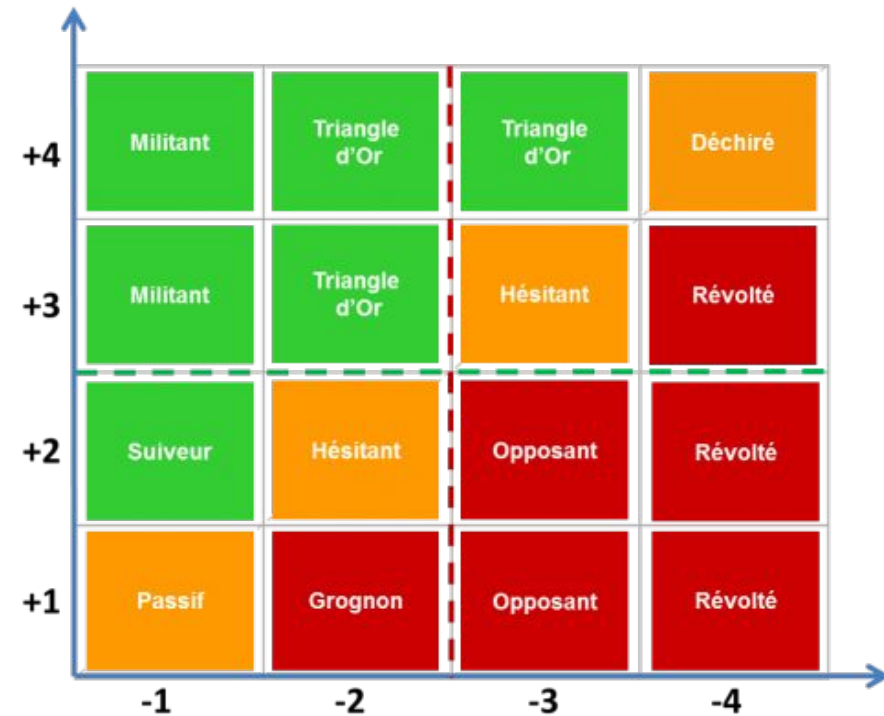
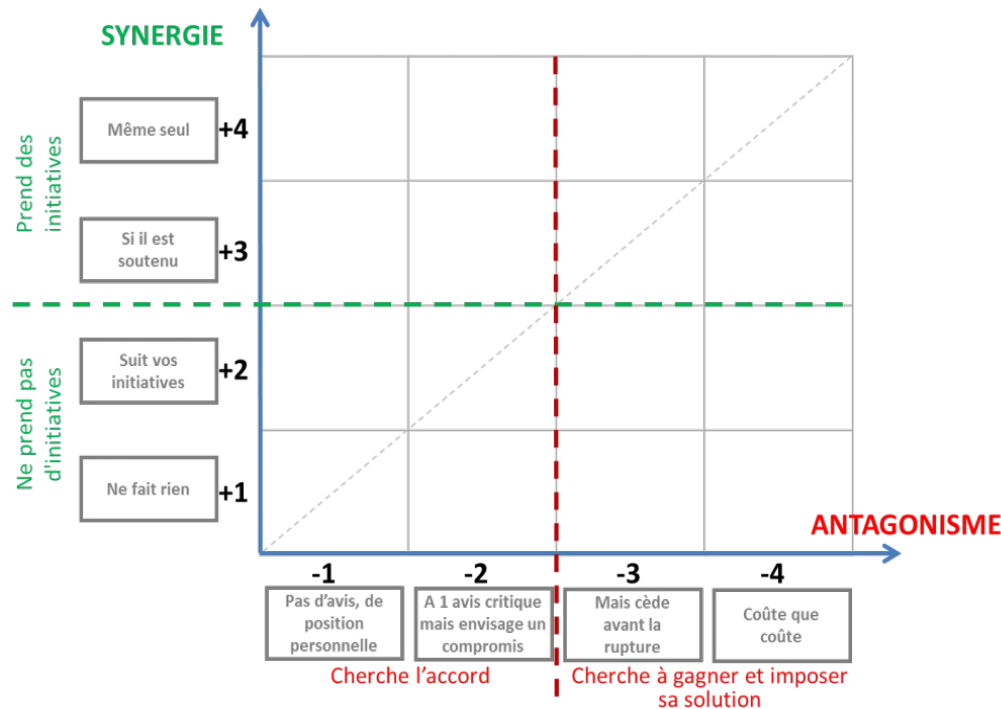
- **Understanding needs and expectations:** identify stakeholders, their expectations and requirements to define project objectives.
- **Identify interests and influences:** Align the interests of the most influential stakeholders to make them allies.
- **Make informed decisions:** Measure the potential impact on all parties involved.
- **Communicate effectively:** Identify the appropriate communication channels and the important information to be conveyed.
- **Manage risks and reduce surprises:** Develop plans to anticipate potential problems, manage risks and minimise their impact.
- **Engage support:** Actively involve stakeholders throughout the project to improve their commitment and support.

In short, stakeholder analysis helps to better understand the context in which the project is taking place, to align objectives, to manage expectations and to create an environment conducive to the project's success.

Preparing a project

A project brings together an ecosystem of players whose influences need to be controlled.

Stakeholder mapping is a socio-dynamics tool based on two parameters: Stake (everyone's interest in the project) & Power (their room for manoeuvre):



Adapt your communication and governance strategy by being :

- Participate with allies (co-construction), support them and lean on them, by organising the allies' camp.
- Imposing with the opponents, wasting no time in convincing the diehards, countering their natural game.
- Negotiate with the hesitant (deal with the conditions of membership) with the aim of winning them over.

Preparing a project

A project brings together an ecosystem of players whose roles must be defined

The **RACI** matrix provides a simple, consolidated view of "who does what" within a team, process or project.

The matrix clearly formalises responsibilities by cross-referencing the list of activities and the contribution of each stakeholder.


The RACI matrix defines the responsibilities assigned to activities/tasks where :

R - Responsible : is the resource that performs the activity.

A - Accountable : is the guarantor (validator) of the execution of the activity.

C - Consulted : is consulted on the activity.

I - Informed : is only informed of the activity.



R Responsible
A Accountable
C Consulted
I Informed

NAME	[TEAM MEMBER NAME]	[TEAM MEMBER NAME]	[TEAM MEMBER NAME]	[TEAM MEMBER NAME]
ROLE	CONTENT	DESIGNER	DEV	PM
PROJECT DELIVERABLE / ACTIVITY				
PHASE 1: PROJECT PLANNING				
Research	C	I	I	R
Interviews	A	C	C	I
Wireframe	R	C	I	A
PHASE 2: DEVELOPMENT				
Provide Imagery	A	R	C	I
Systems Design	A	R	R	I
Systems Analysis and Requirements	A	A	R	C

(downloadable model)

Preparing a project

A project brings together an ecosystem of players whose roles must be defined

Defining project governance is important for establishing a framework for decision-making, responsibility and control throughout the project. Governance describes the organisational structure (the steering bodies) and the processes which ensure that the project is managed efficiently, transparently and in line with the organisation's objectives.

The benefits of well-established governance :

- Define stakeholder roles, clarifying who makes what decisions and when.
- Assign responsibilities to each stakeholder, ensuring that everyone is held accountable for their contribution. And encouraging their commitment and involvement.
- Promote transparency by making decision-making processes visible to all.
- Determine mechanisms for identifying, assessing and managing potential project risks.
- Define the necessary authorisations for expenditure and the use of resources.
- Formalise communication channels so that each stakeholder is kept informed of progress, challenges and important decisions.
- Incorporate regular monitoring mechanisms to assess project performance and make any necessary adjustments.

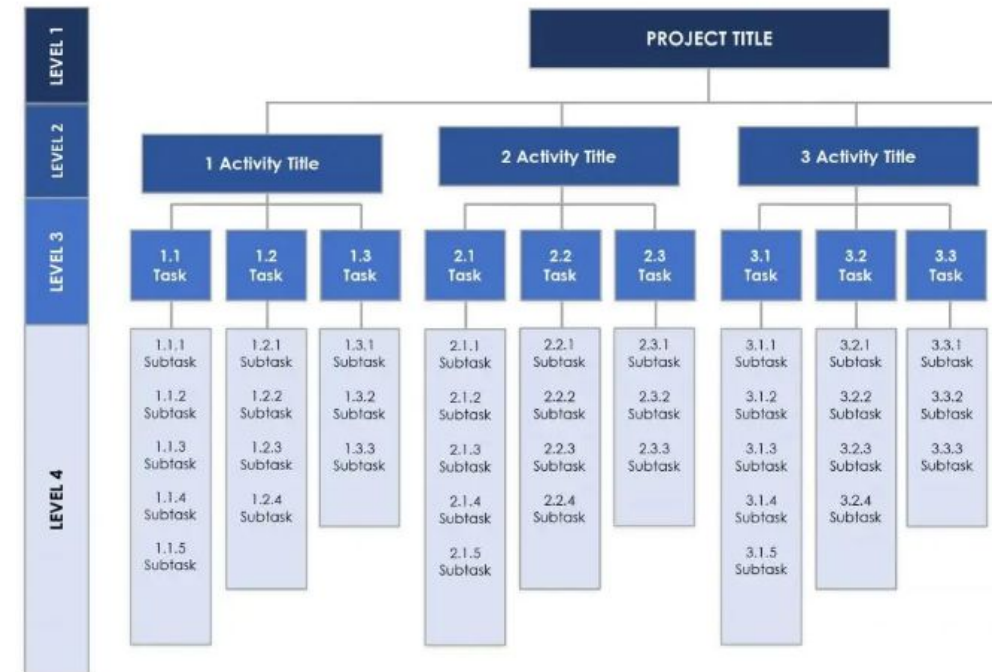
The scoping phase

Breakdown for better management: the key to project planning and monitoring

The WBS (**Work Breakdown Structure**) is a hierarchical structure that breaks down a project into smaller, more manageable tasks, making it easier to plan, organise and manage.

WORK BREAKDOWN STRUCTURE LEVELS TEMPLATE

PROJECT TITLE	COMPANY NAME
PROJECT MANAGER	DATE



- Clarity of deliverables: identify the tangible results to be achieved.
- Assignment of responsibilities: define the responsibilities of each stakeholder.
- Estimating resources: making it easy to estimate the resources needed for each task, including the time, budget and staff required.
- Schedule planning: create a detailed schedule by linking tasks in a logical order and establishing dependencies between them.
- Monitoring and control: provide a basis for tracking the progress of the project and carrying out monitoring.

The WBS is an essential project tool for breaking down and organising the work, clarifying the deliverables, estimating the resources required, planning the schedule and facilitating monitoring.

The scoping phase

(downloadable models)

WBS(Work Breakdown Structure)

PROJECT NAME				
PROJECT DELIVERABLE				
SCOPE STATEMENT				
START DATE		END DATE		

[illegible]

PROJECT TITLE	START DATE	PROJECT DURATION in days
PROJECT ALPHA	01/02	
PROJECT MANAGER	END DATE	
	03/26	85

VBS NO.	TASK NAME	STATUS	ASSIGNED TO	START DATE	END DATE	DURATION in days
1	PROJECT CONCEPTION AND INITIATION	Complete		01/02	02/09	39
1.1	- Project Charter	Complete	Member A	01/02	01/11	10
1.1.1	-- Project Charter Revisions	Complete	Member A	01/07	01/11	5
1.2	- Research	Complete	Member B	01/10	02/23	45
1.3	- Projections	Complete	Member B	01/10	01/20	11
1.4	- Stakeholders	Complete	Member A	01/16	01/29	14
1.5	- Guidelines	In Progress	Member C	01/19	02/01	14
1.6	- Project Initiation	In Progress	Member B	01/22	02/09	19
2	PROJECT DEFINITION AND PLANNING	In Progress		01/28	02/14	18
2.1	- Scope & Goal Setting	On Hold	Member D	01/28	02/06	10
2.2	- Budget	In Progress	Member D	01/31	02/02	3
2.3	- Communication Plan	In Progress	Member B	02/04	02/12	9
2.4	- Risk Management	Complete	Member A	02/06	02/14	9
3	PROJECT LAUNCH & EXECUTION	Complete		02/18	03/26	38
3.1	- Status & Tracking	In Progress	Member A	02/18	02/20	3
3.2	- KPIs	In Progress	Member C	02/18	02/23	6
3.2.1	-- Monitoring	In Progress	Member D	02/18	02/26	9
3.2.2	-- Forecasts	Not Started	Member D	02/21	02/23	3
3.3	- Project Updates	Not Started	Member B	02/22	02/23	2
3.3.1	-- Chart Updates	In Progress	Member A	02/25	03/26	31

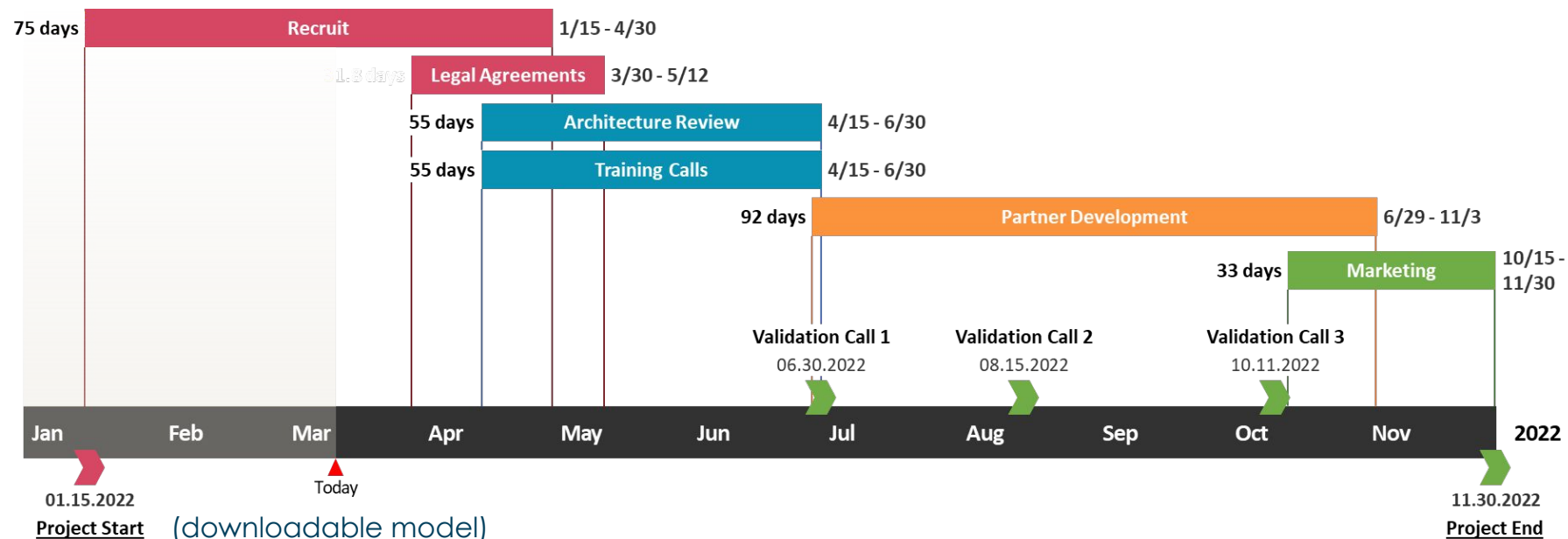
The scoping phase

GANTT chart, an effective time and resource management tool

As a complement to the WBS, the **Gantt chart** is a project management tool that provides a visual representation of tasks, dependencies and deadlines. It provides a clear, structured overview of the project, making it easier to plan, coordinate and monitor activities.

With its horizontal bars representing the different tasks and their durations, the Gantt chart helps to visualise the progress of the project, to identify the interdependencies between tasks and to manage resources and deadlines effectively.

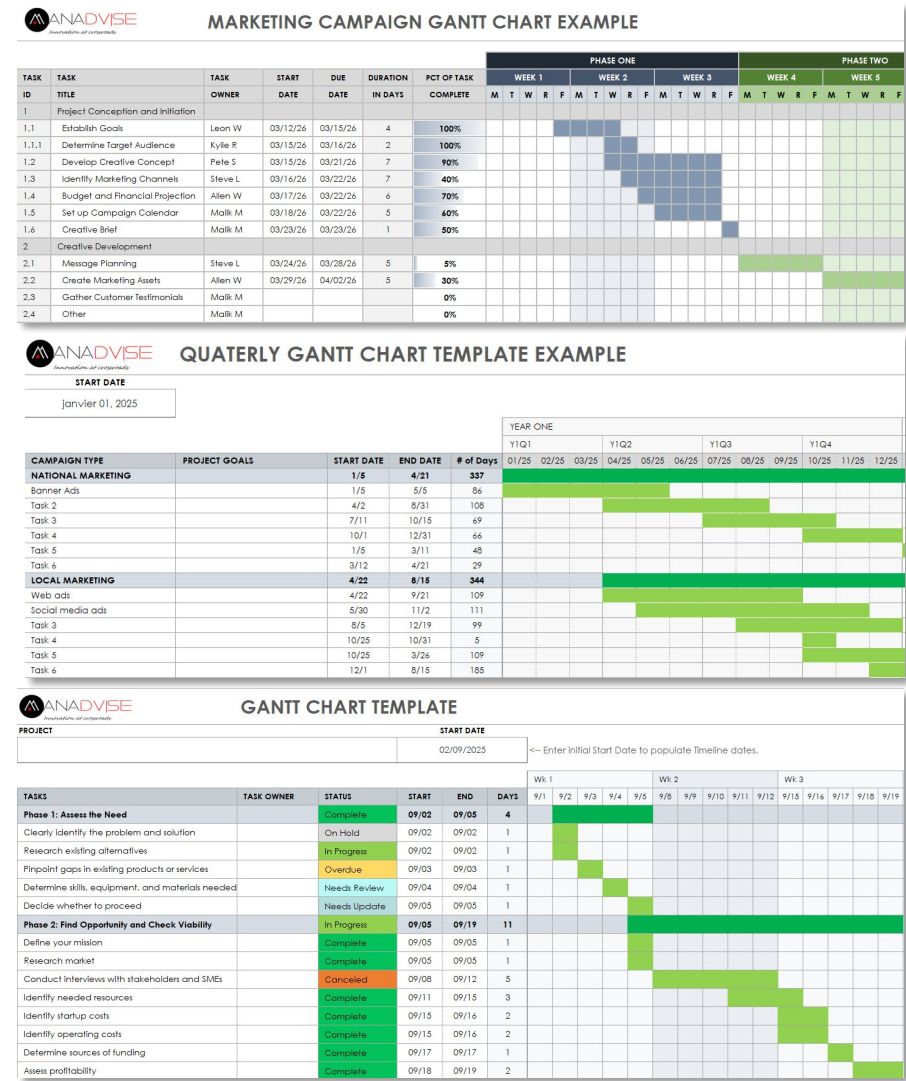
It's a valuable tool to help the project team stay organised, meet deadlines and achieve objectives.



The scoping phase

GANTT chart, an effective time and resource management tool

(downloadable model)



The scoping phase

From risk assessment to proactive risk management

The risk assessment matrix, also known as the probability/impact matrix, is a tool used to assess the potential risks associated with the project.

It is used to identify, rank and prioritise risks, so that appropriate preventive or mitigation measures can be taken.

1. Draw up a list of potential risks (technical, financial, operational, environmental or stakeholder-related).
2. Rank and prioritise these risks according to their severity and probability. The combination of these two factors determines the level of risk associated with each undesirable event.
3. Plan mitigation and contingency strategies to minimise the negative impacts if risks do occur.
4. Transparently share information on identified risks, mitigation strategies and stakeholder responsibilities.
- 5.

	SEVERITY			
	ACCEPTABLE <small>LITTLE TO NO EFFECT ON EVENT</small>	TOLERABLE <small>EFFECTS ARE FELT, BUT NOT CRITICAL TO OUTCOME</small>	UNDESIRABLE <small>SERIOUS IMPACT TO THE COURSE OF ACTION AND OUTCOME</small>	INTOLERABLE <small>COULD RESULT IN DISASTER</small>
LIKELIHOOD				
IMPROBABLE <small>RISK IS UNLIKELY TO OCCUR</small>	LOW - 1 -	MEDIUM - 4 -	MEDIUM - 6 -	HIGH - 10 -
POSSIBLE <small>RISK WILL LIKELY OCCUR</small>	LOW - 2 -	MEDIUM - 5 -	HIGH - 8 -	EXTREME - 11 -
PROBABLE <small>RISK WILL OCCUR</small>	MEDIUM - 3 -	HIGH - 7 -	HIGH - 9 -	EXTREME - 12 -
RISK RATING KEY	LOW 0 - ACCEPTABLE OK TO PROCEED	MEDIUM 1 - ALARP (as low as reasonably practicable) TAKE MITIGATION EFFORTS	HIGH 2 - GENERALLY UNACCEPTABLE SEEK SUPPORT	EXTREME 3 - INTOLERABLE PLACE EVENT ON HOLD

The scoping phase

From risk assessment to proactive risk management

(downloadable models)

SIMPLE RISK ASSESSMENT TEMPLATE EXAMPLE

PROJECT ID

PROJECT NAME

PROJECT MANAGER

1234

PROJECT ALPHA

JOHN DOE

					RISK ASSESSMENT			MITIGATIONS / WARNINGS / REMEDIES	INFORMATION AND COMMUNICATIONS
REF / ID	TOPIC	RISK	CONTROL ENVIRONMENT	CONTROL ACTIVITIES	RISK SEVERITY	RISK LIKELIHOOD	RISK LEVEL		
1,1	Disaster recovery (DR)	Not having data backup and verification capabilities physically on the premises in the event of a disaster.	Duplicate on-premises data center so that one is on site and we have an accurate and reliable data redundancy between the	Set recovery plan objectives.	ACCEPTABLE	POSSIBLE	LOW	Distinct data center redundancy testing.	IT departmental meeting on PII and GDPR standards.
1,2	Data integration				TOLERABLE	POSSIBLE	MEDIUM		
1,3	Access risk				UNDESIRABLE	PROBABLE	HIGH		
2,1	Monitor regulatory compliance				INTOLERABLE	PROBABLE	EXTREME		

Preparing a project

A few (immutable) laws to bear in mind

- **Pareto's law** explains that 20% of our efforts generate 80% of the results. It is therefore necessary to concentrate on the essentials in order to deliver 80% of the results as quickly as possible. Once this threshold has been reached, major efforts will bring only marginal benefits.
- **Parkinson's Law** explains that "all work tends to expand in order to use all the resources allocated to it". If you allow 2 days to do a job, in most cases the work will be done in the few hours before the deadline. Plan short deadlines, think AGILE: small sprints produce more results than a long marathon.
- **Hofstadter's Law**: "It always takes longer than expected to complete a project... even with Hofstadter's Law".
- **Murphy's Law**, known as the 'Law of Maximum Annoyance'. If something's going to go wrong, it's going to go wrong!



Preparing a project

Subdivision & planning of tasks, deadlines, resources and risks

The elements resulting from the preparation phase (definition phase and scoping phase) are presented at a collective meeting which formally marks the start of the project implementation phase = the kick-off meeting.

Success factors for a kick-off meeting :

- Prepare for the meeting, setting out its objectives and timetable in the invitation,
- (re) Present the project, its objectives, what is at stake, its importance for the organisation, and the context in which it is being carried out,
- Define the collective operating rules (governance),
- Remind everyone of their responsibilities in the project,
- Present the simplified project schedule,
- Specify resource and/or funding requirements,
- Plan the timetable for the next stages - it's always important to know what the next steps are.
-

3 # Managing a project



- a) The keys to team cohesion
- b) The project is always managed on two levels:
 - i. At operational level (Coordination & Monitoring)
 - ii. At the decision-making level (Reporting)

Managing a project

Before being a team, a group is a collection of individuals

The project manager is a facilitator, who must build the team and encourage its cohesion in order to express its synergy.

Some keys to team cohesion

The role of the Project Manager

KNOWLEDGE



Encouraging meetings between team members

CONTACT



Keeping communication alive throughout the project

COOPERATION



Put in place the conditions for a collective game where everyone understands their role and their place

CONCILIATION



De-escalate tense situations quickly

CONVIVIALITY



Organise more informal moments, celebrate successes.

Managing a project

The project manager's remit: managing the project from start to finish

Throughout the life cycle of the project, management must be able to

- Monitor and control the smooth running of the project,
- Ensuring that planned tasks are completed and key milestones met,
- Maintain a balance between quality, time and cost objectives throughout the project,
- Anticipate any difficulties that may be encountered, and propose action plans to correct them,
- Ensure that the project is aligned with the company's strategy,
- Provide information for decision-making.

Managing a project

A two-pronged operational and decision-making approach

Project management is carried out at two levels:

1. At the operational level, to ensure that the "stakeholders" in the project are always balanced (Monitoring and coordination of stakeholders)
2. At the decision-making level, to ensure that the "outcomes" of the project are always aligned with the strategy (Reporting)

A project is properly managed when the following conditions are met:

- There is an organisation and a number of players responsible for operational management (Project Committee - COPRO) and decision-making (Steering Committee - COPIL).
- There is a precise and detailed vision of quality, deadline and cost targets, which serves as a reference for management.
- There is an up-to-date, accurate and detailed view of quality, time and cost targets, taking into account what has been done and what remains to be done.
- Variances between the forecast and the updated vision are always measured. Actions to reduce them are planned.
- The project objectives remain aligned with the organisation's strategy.

Managing a project

A two-pronged operational and decision-making approach

Operational management

- Coordinate the completion of tasks
- Inform the operational players of the decisions taken by the decision-making bodies (Steering Committee)
- Ensure that all the planned tasks are taken into account and completed
- Check that the deliverables comply with the quality objectives
- Update the project progress
- Update the Planning and Budget
- Update the Action Tracking
- Update the Risk Analysis (& corrective actions)
- Assess the differences between "planned" and "completed", plan corrective actions
- Prepare/animate COPIL meetings

Decision-making steering

- Inform the steering committee of the progress of the project (what has been done, what remains to be done)
- Have the results obtained formally validated, so as to focus on the actions to come
- Report alerts and propose action plans
- Have decisions validated
- Arbitrate adjustments, in line with the overall strategy

4 # Capitalising on experience



a) How can a project be part of a continuous improvement approach?

Capitalising on experience How can a project be part of a continuous improvement approach?

Often neglected (especially when the project is a success), why carry out a project review when the project has just finished and everyone has already moved on to other things?

- i. To learn from it: identify successes and failures
- ii. Avoid repeating the same mistakes in similar situations
- iii. Recognising success factors to know how to create favourable conditions

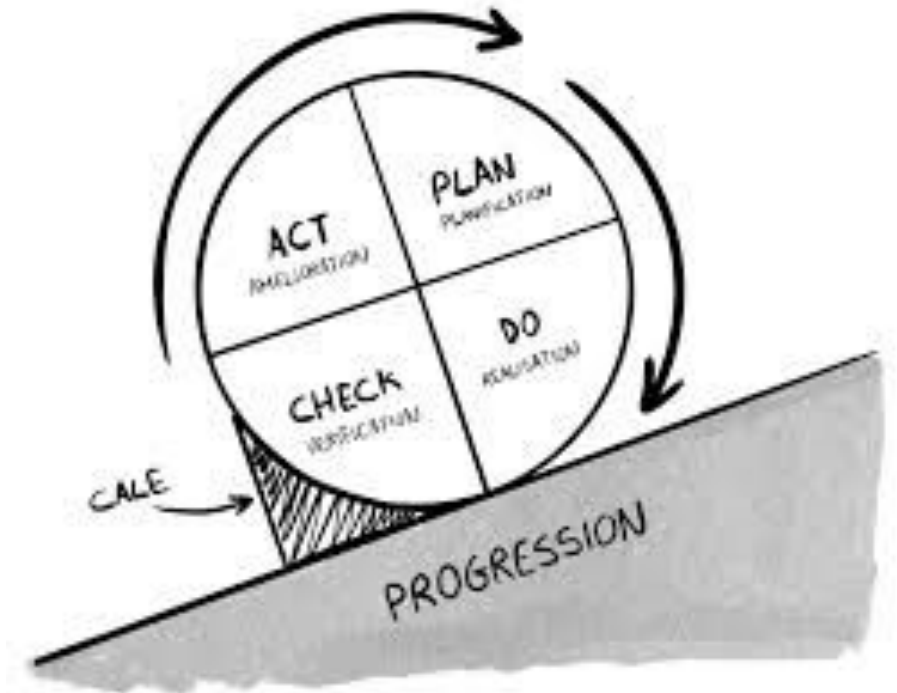
Capitalising on experience How can a project be part of a continuous improvement approach?

Capitalising on experience to embed lessons learned, a continuous improvement approach

Prepare the "post mortem" to encourage self-assessment, encourage deep reflection and anchor learning.

- Understand why certain things have been done by objectifying them
- Consolidate what has been learnt before it is forgotten, and analyse "cold" what could not be put on the table "hot".
- Teach those who weren't there so that they can benefit from the lessons of previous experiences
- Do not allow resentment to develop when misunderstandings have arisen; resentment can last for years if it is not dealt with.

The post mortem is the "wedge" in the Deming wheel



The fundamentals of project management The factors that lead to the success of a project can be controlled

- Obtaining management commitment
- Define clear, achievable objectives
- Coordinating a skilled and diverse team
- Maintaining effective communication
- Sound planning, rigorous monitoring & continuous evaluation of progress
- Proactive risk management
- Driving stakeholder engagement
- Encouraging the project team to be flexible and adaptable

The fundamentals of project management

