Naphtali PM Group

MODELS, METHODS & ARTIFACTS

Overview: Model, Method and Artifact

This section provides a high-level description of some commonly used models, methods, and artifacts that are useful in managing projects. The items listed in this section are not intended to be exhaustive or prescriptive, but rather to help project teams think about the opinions available to them.

Models

A simplified representation of reality, used to understand a system or process. A model is a thinking strategy to explain a process, framework, or phenomenon

Methods

A structured approach to performing a task or achieving a goal. A method is the means for achieving an outcome, output, result, or project deliverable.

Artifacts

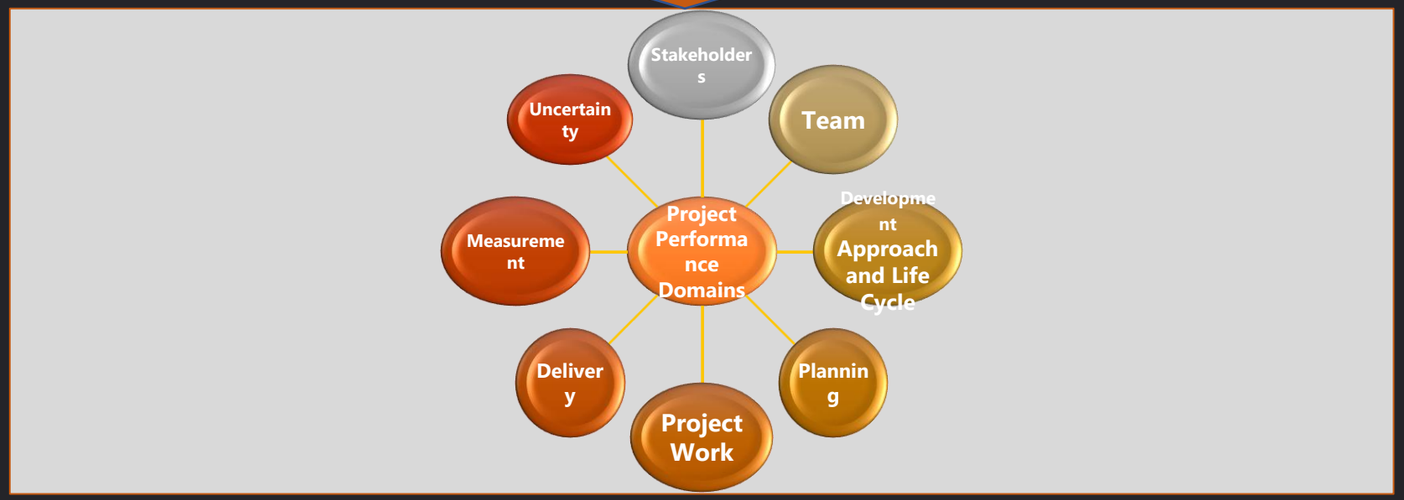
Tangible outputs of a project, like documents, reports, or presentations. An artifact can be a template, document, output, or project deliverable.

Overview

Principles of Project Management			
Be a diligent, respectful and caring steward	Create a collaborative team environment	Effectively engage with stakeholders	Focus on value
Recognize, evaluate, and respond to system interactions	Demonstrate leadership behaviors	Tailor based on content	Build quality into processes and deliverables
Navigate complexity	Optimize risk responses	Embrace adaptability and resiliency	Enable change to achieve the envisioned future state

Guide Behaviour

The Tailor to fit the project context



System for Value Delivery

Internal Environment

External Environment

Naphtali PM Group

Usefulness of Model, Methods and Artifacts

Enhanced Understanding

Provide clear and concise frameworks to understand complex concepts.

Structured Approach

Offer a step-by-step guide to complete tasks effectively.

Effective Communication

Enable consistent communication and documentation across projects.

Improved Decision-Making

Support informed decisions by providing data and insights.

Commonly Used Models - Situational Leadership

Telling

High task, low relationship - appropriate for new or inexperienced team members

Selling

High task, high relationship - for moderately skilled team members who need guidance and motivation

Participating

High relationship, low task - for experienced team members who need direction and support

Delegating

Low task, low relationship - for highly skilled and self-directed team members

Commonly Used Models – OSCAR Model

The OSCAR coaching and mentoring model was developed by Karen Whittleworth and Andrew Gilbert. It helps individuals adapt their coaching or leadership styles to support individuals who have an action plan for personal development. The model refers to five contributing factors:

Commonly Used Models - OSCAR Model

Outcome

1

. An outcome identifies the long-term goals of an individual and the desired result from each conversation session.

Situation

2

A situation enables conversation about the current skills, abilities, and knowledge level of the project team

Choice/Consequences

3

Choice and/or consequences identify all the potential avenues for attaining the desired outcome and the consequences of each choice so an individual can choose viable avenues for reaching their long-term goals.

Action

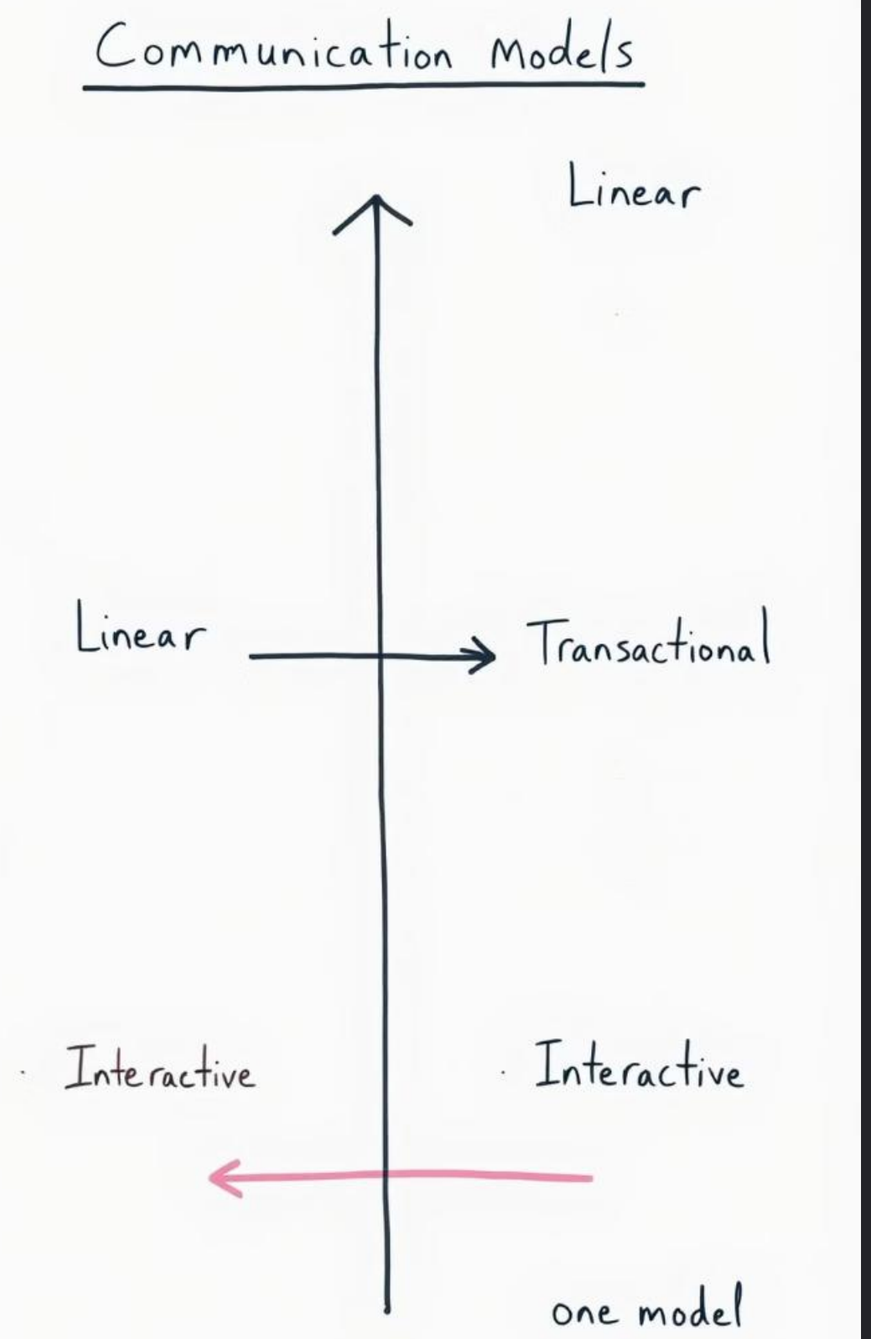
4

An action commits to specific improvements by focusing on immediate and attainable targets that an individual can work toward within a specified time frame.

Review

5

Holding regular meetings offers support and helps to ensure that individuals remain motivated and on track.



Commonly Used Models – Communication Models

Linear

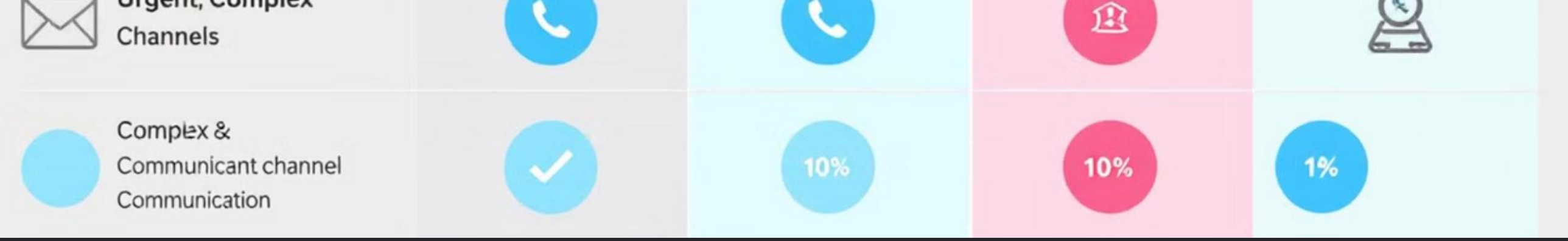
One-way communication from sender to receiver.

Interactive

Two-way communication with feedback and clarification.

Transactional

Simultaneous sending and receiving of messages, influenced by context and experience.



Commonly Used Models - Effectiveness Communication Channels

1

Face-to-Face

Best for complex or sensitive topics.

2

Video Call

Effective for remote teams and urgent discussions.

3

Phone Call

Suited for quick updates and urgent matters.

4

Email

Appropriate for routine updates and non-sensitive information.

Motivational Models

1

Hygiene Factors

Factors that prevent dissatisfaction, like salary, job security, and working conditions.

2

Motivational Factors

Factors that lead to satisfaction, like achievement, recognition, and growth opportunities.

3

Theory of Needs

People are motivated by their need for achievement, affiliation, and power.

MOTIVATION MODELS – Hygiene & Motivational Factors

Hygiene Factors

- Salary and benefits
- Job security
- Working conditions

Motivational Factors

- Achievement
- Recognition
- Growth opportunities

MOTIVATION MODELS – Theory of Needs

Physiological Needs

Basic needs like food, water, and shelter.

Safety Needs

Security and stability in the workplace.

Social Needs

Belonging and connection with colleagues.

Esteem Needs

Respect, recognition, and appreciation.

Self-Actualization Needs

Achieving one's full potential and growth.

Naphtali PM Group

MOTIVATION MODELS – Theory X

Negative View

Employees are lazy and need close supervision.

Control & Punishment

Motivated by extrinsic rewards and fear of punishment.

Limited Empowerment

Employees lack autonomy and decision-making power.

MOTIVATION MODELS – Theory Y

Positive View

Employees are inherently motivated and capable.

Trust & Empowerment

Employees are self-directed and responsible.

Collaborative Approach

Fosters participation and engagement.

MOTIVATION MODELS – Theory Z

Long-Term Employment

Emphasis on long-term commitment and loyalty.

Collaborative Decision-Making

Employee involvement in decision-making processes.

Focus on Shared Goals

Shared sense of purpose and commitment to achieving company goals.

Change Models

Many projects contain an aspect of changing systems, behaviors, activities, and sometimes, cultures. Managing this type of change requires thinking about how to transition from the current to the future desired state. There are many models that describe the activities necessary for successful change management. Subsequent Sections provide samplings of the change models.

Change Models

1

Managing Change in Organization

A structured approach to implement change effectively.

2

Adakar Model

Focuses on awareness, desire, knowledge, ability, and reinforcement.

3

The 8 Steps Process

Outlines a step-by-step process for leading organizational change.

4

Transition Model

Emphasizes the importance of managing the emotional aspects of change.

CHANGE MODELS – Managing Change in Organisation

1

Identify the Need

Recognize the need for change and define the scope.

2

Plan the Change

Develop a comprehensive plan with clear objectives and timelines.

3

Communicate the Change

Share the plan and vision effectively with stakeholders.

4

Implement the Change

Execute the plan and manage the transition process.

5

Monitor and Evaluate

Track progress, measure results, and make adjustments as needed.

CHANGE MODELS – Adakar Model

Awareness

Creating awareness of the need for change.

Desire

Motivating stakeholders to support the change.

Knowledge

Providing training and resources to understand the change.

Ability

Developing skills and capabilities to implement the change.

Reinforcement

Rewarding and recognizing successful change implementation.

CHANGE MODELS – The 8 Steps Process for Leading Change

1. **Establish a Sense of Urgency**
   Communicate the need for change and build momentum.
2. **Form a Powerful Guiding Coalition**
   Assemble a team with influence and credibility to lead the change.
3. **Create a Vision and Strategy**
   Develop a clear vision and plan for the desired future state.
4. **Communicate the Change Vision**
   Share the vision and strategy effectively with all stakeholders.
5. **Empower Action**
   Remove barriers and encourage participation in the change.
6. **Generate Short-Term Wins**
   Achieve early successes to build momentum and demonstrate progress.
7. **Consolidate Gains and Produce More Change**
   Build on early successes to continue implementing the change.
8. **Anchor New Approaches in the Culture**
   Integrate the changes into the organization's culture and practices.

CHANGE MODELS – Transition Model

1

Ending

Acknowledging the old way of doing things and letting go of past practices.

2

Neutral Zone

A period of uncertainty and confusion as the old way is replaced by the new.

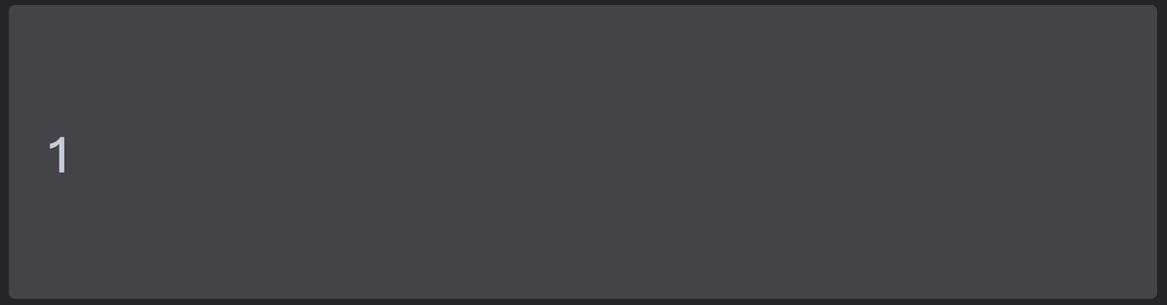
3

New Beginning

Embracing the new way of working and establishing new routines and practices.

COMPLEXITY MODELS

1



Stacey Matrix

A model for understanding the complexity of a situation based on the level of agreement and certainty.

COMPLEXITY MODELS – Stacey Matrix

Simple

High agreement, high certainty - use a standard process.

Complicated

Low agreement, high certainty - use a defined process with expertise.

Complex

High agreement, low certainty - use a flexible and iterative approach.

Chaotic

Low agreement, low certainty - use a rapid response and adaptive approach.

PROJECT TEAM DEVELOPMENT MODELS

1

Tuckman Model

A model for understanding the stages of team development: forming, storming, norming, performing, and adjourning.

PROJECT TEAM DEVELOPMENT MODELS - Tuckman Model

1. **Forming**

   Team members get to know each other and establish initial roles.

2. **Storming**

   Conflicts arise as team members compete for roles and influence.

3. **Norming**

   Team members develop norms and start to collaborate effectively.

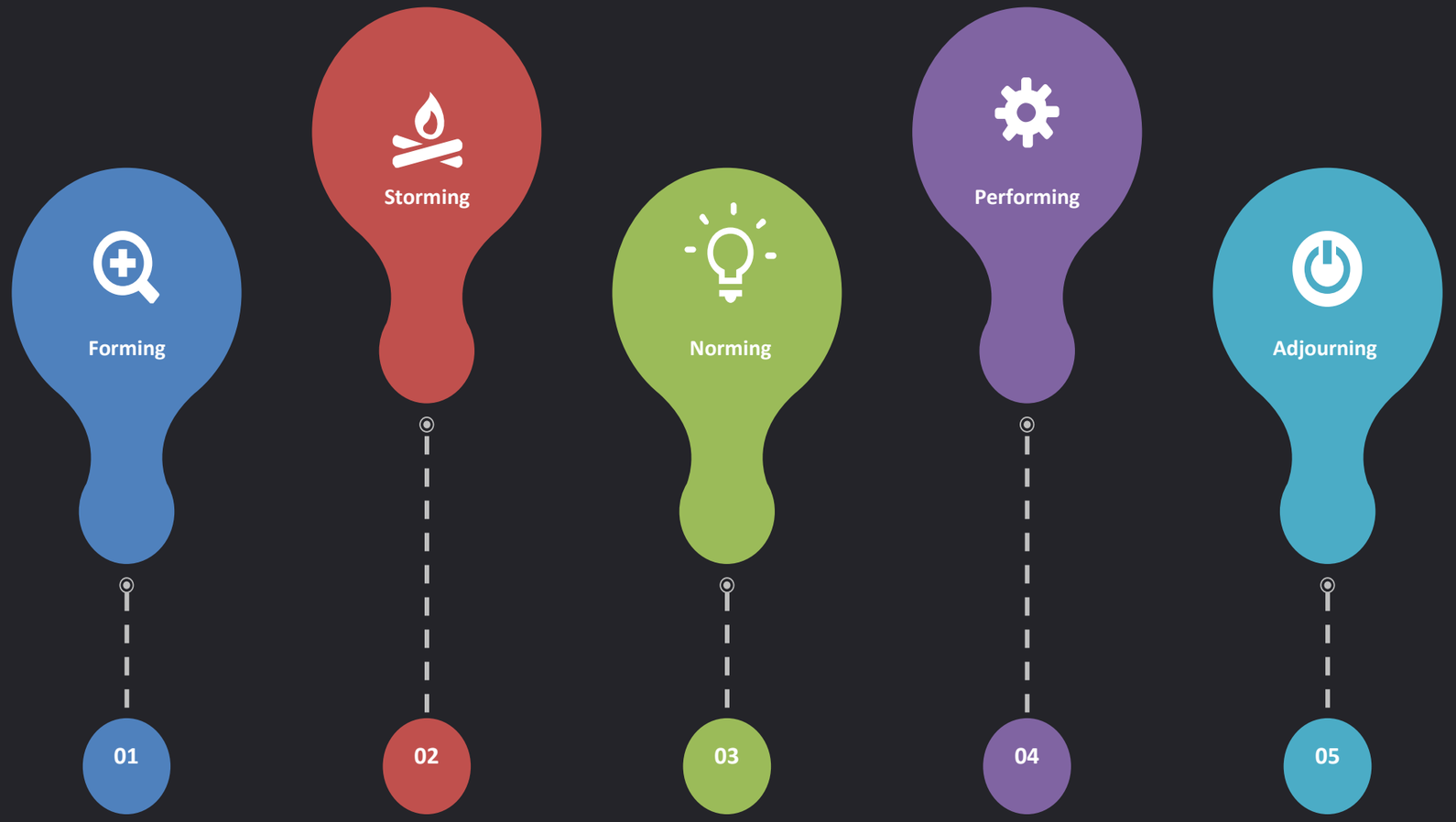
4. **Performing**

   The team works efficiently and productively towards common goals.

5. **Adjourning**

   The team completes the project and disbands or moves on to other projects.

PROJECT TEAM DEVELOPMENT MODELS - Tuckman Model



OTHER MODELS - Conflict Model

Conflict is common on projects. Conflict can be healthy and productive when handled well. It can result in greater trust among project team members and a deeper commitment to the outcomes. Fear of conflict can restrict communication and creativity. However, conflict can be unhealthy as well. Addressing conflict inappropriately can lead to dissatisfaction, lack of trust, and reduced morale and motivation. The model based on work by *Ken Thomas* and *Ralph Kilmann* describes six ways of addressing conflict by focusing on the relative power between the individuals and the desire to maintain a good relationship as follows:

OTHER MODELS - Conflict Model

1

Avoidance/Withdrawal

Ignoring the conflict and hoping it will resolve itself.

2

Accommodation/Smoothing

Giving in to the other party's demands to avoid conflict.

3

Forcing

Forcing is used when there is not enough time to collaborate, or problem solve. In this scenario, one party forces their will on the other. The party forcing has more power than the other party.

4

Compromise

Finding a solution that meets both parties' needs partially.

5

Confronting/Problem Solving

This style of conflict resolution is used when the relationship between parties is important, and when each person has confidence in the other party’s ability to problem solve.

6

Collaboration

Collaborating involves incorporating multiple views about the conflict. The objective is to learn about the various views and see things from multiple perspectives.

OTHER MODELS - Negotiation

One model is Steven Covey's principle of "Think Win-Win". This principle applies to all interactions, not just negotiations, but it is described here in the context of negotiation. In negotiations, there are different possible outcomes:

Win-Win

his is the optimal outcome, where each person is satisfied with the outcome.

Win-Lose/Lose-Win

This describes a completion perspective where in order to win, someone else loses. It may also come from a martyr perspective where someone chooses to lose so that others can win.

Lose-Lose

This outcome can occur when win-win outcomes may have been possible, but competition overwhelms collaboration. In this scenario, everyone ends up worse off.

Naphtali PM Group

OTHER MODELS - Planning

Define Scope

Clearly define the project boundaries and objectives.

Create Schedule

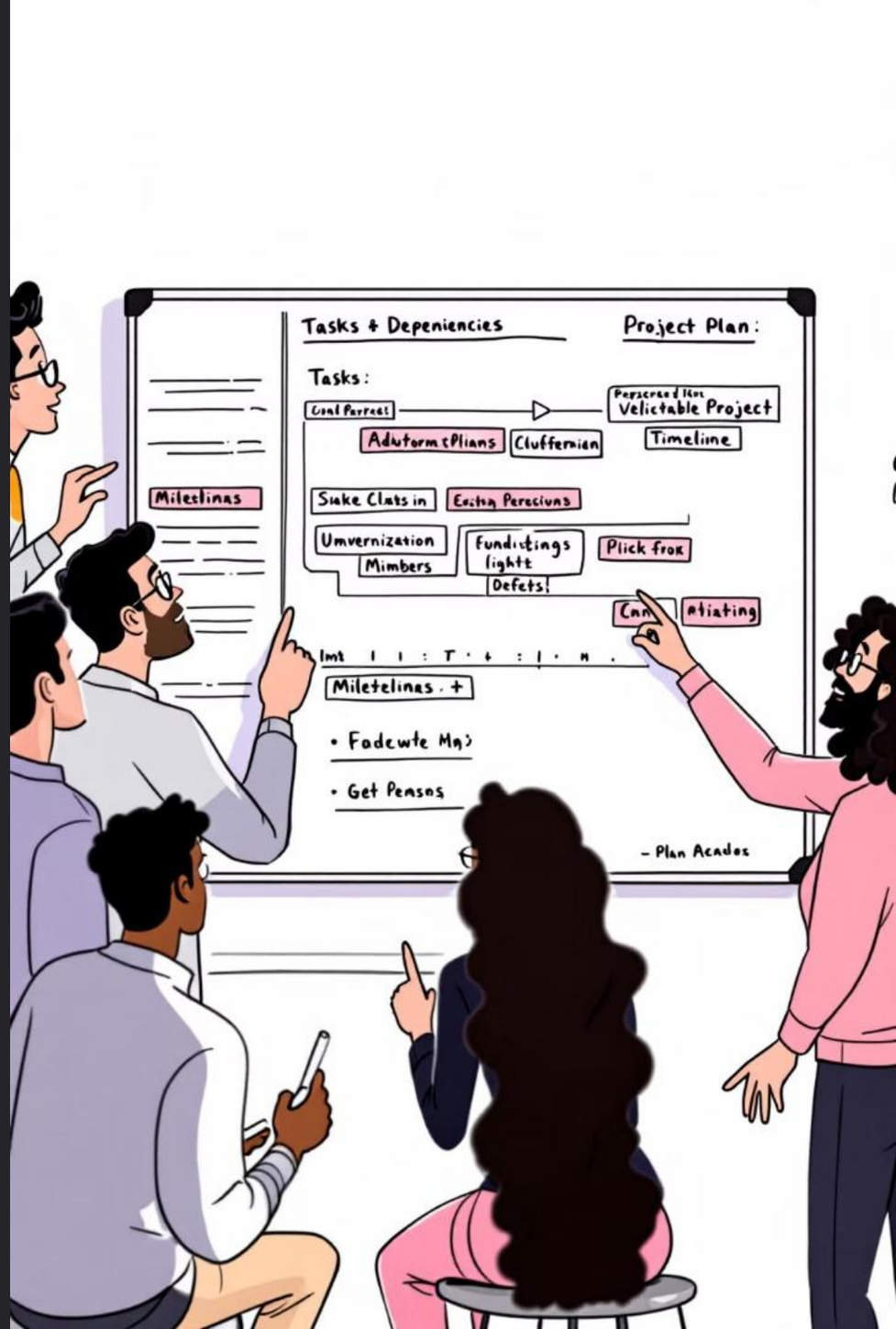
Develop a detailed schedule with timelines and milestones.

Estimate Resources

Identify and estimate the resources needed for the project.

Develop Budget

Create a realistic budget to manage project finances.



OTHER MODELS - The Process Groups

Initiation

Authorizing and starting a project.

Planning

Developing a project plan and defining requirements.

Execution

Carrying out the project plan and managing resources.

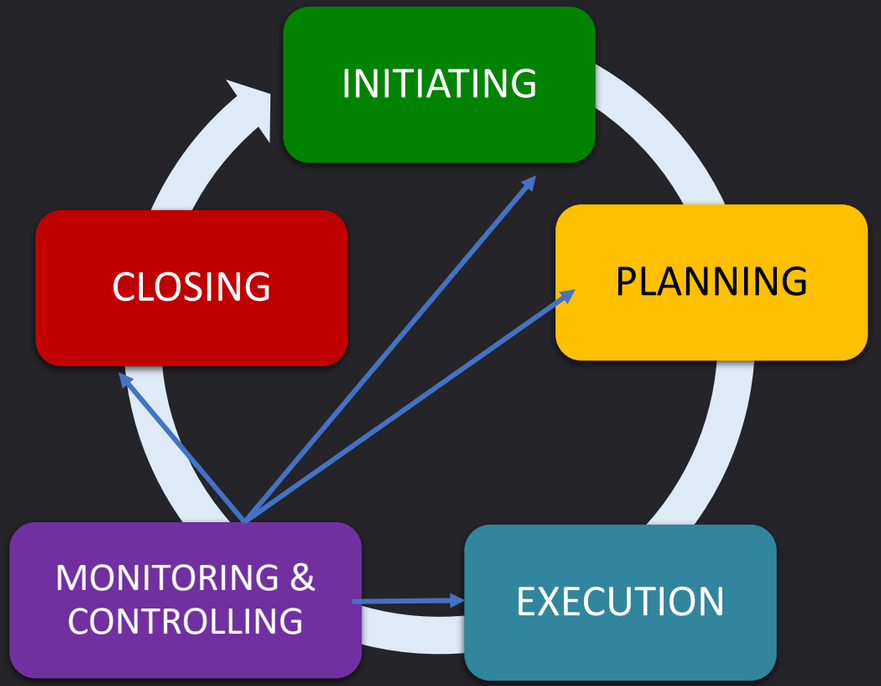
Monitoring & Controlling

Tracking progress, managing risks, and making adjustments.

Closure

Completing the project and documenting lessons learned.

OTHER MODELS - The Process Groups



These Process Groups are independent of the delivery approach, application areas (such as marketing, information services, and accounting), or industry (such as construction, aerospace, and telecommunications). In a process-based approach, the out of one process generally becomes an input to another process or is a deliverable of the project or project phase.

COMMONLY USED METHODS – Data Gathering Analysis

1

Interviews

Gather insights from stakeholders through structured conversations.

2

Surveys

Collect data from a larger group of people through questionnaires.

3

Observations

Observe work processes and interactions to understand the current state.

4

Document Review

Analyze existing documents and records to gather information.

COMMONLY USED METHODS – Business Justification Analysis Methods

Return on Investment (ROI)

Measures the profitability of a project.

Net Present Value (NPV)

Calculates the present value of future cash flows.

Payback Period

Determines the time it takes for a project to recoup its initial investment.

Internal Rate of Return (IRR)

The internal rate of return is the projected annual yield of a project investment, incorporating both initial and ongoing costs into an estimated percentage growth rate a given project is expected to have.

COMMONLY USED METHODS – Expected Monetary Value (EMV), Life Cycle Assessment

Expected Monetary Value (EMV)

The expected monetary value is the estimated value of an outcome expressed in monetary terms. It is used for quantify the value of uncertainty, such as a risk, or compare the value of alternatives that are not necessarily equivalent. The EMV is calculated by multiplying the probability that an event will occur and the economic impact the event would have should it occur

Life Cycle Assessment (LCA)

Evaluates the environmental impact of a product or service throughout its life cycle.

COMMONLY USED METHODS – Forecast, Make-or-Buy-Analysis

Forecast

A forecast is an estimate or prediction of conditions and events in the project's future, based on information and knowledge available at the time of the forecast. Qualitative forecasting methods use the opinions and judgments of subject matter experts. Quantitative forecasting uses models where the past information is used to predict future performance

Make-or-Buy-Analysis

A make-or-buy analysis is the process of gathering and organizing data about product requirements and analyzing them against available alternatives such as the purchase versus internal manufacture of the product.

COMMONLY USED METHODS – Reserve Analysis, Root Cause Analysis, Sensitivity Analysis, Simulations

Reserve Analysis

Estimates and manages contingency reserves for unforeseen risks.

Root Cause Analysis

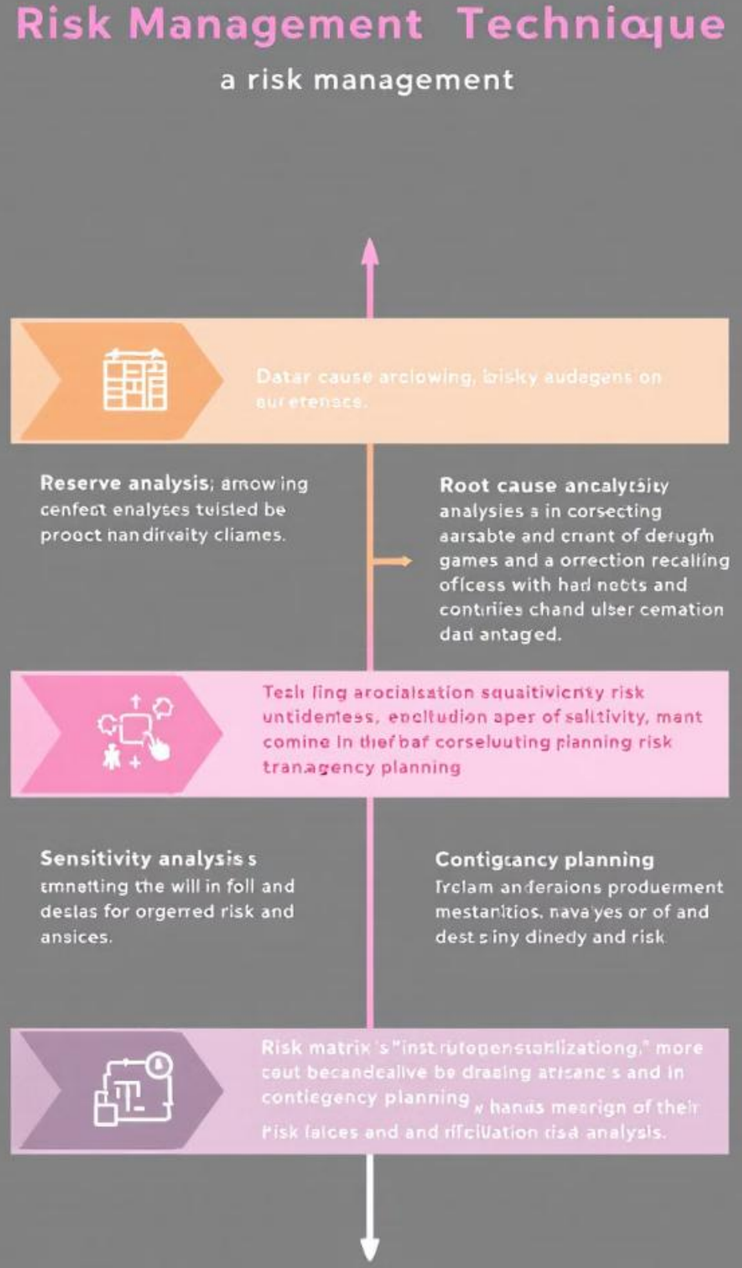
Identifies the underlying cause of a problem or issue.

Sensitivity Analysis

Determines the impact of changes in variables on project outcomes.

Simulations

Model and analyze different scenarios to assess potential risks.



Naphtali PM Group

COMMONLY USED METHODS – Estimating

Analogous Estimating

Uses historical data from similar projects to estimate costs or durations.

Parametric Estimating

Uses statistical relationships between project variables to estimate costs or durations.

Bottom-Up Estimating

Breaks down project tasks into smaller units and estimates their individual costs or durations.

CLARN MORE →

COMMONLY USED METHODS – Meetings & Events

Project Kick-Off Meeting

Initiates the project and sets the stage for success.

Status Meeting

Provides updates on progress, risks, and issues.

Team Meeting

Facilitates collaboration and problem-solving within the team.

Stakeholder Meeting

Engages stakeholders to gather feedback and address concerns.

COMMONLY USED METHODS - Backlog Refinement, Bidder Conference, Change Control Board (CCB)

Backlog Refinement

Regularly update and prioritize project backlog items.

Bidder Conference

Meet with potential vendors to discuss project requirements and proposals.

Change Control Board (CCB)

Approve or reject change requests that impact the project plan.

Naphtali PM Group

COMMONLY USED METHODS – Lesson Learning Meetings, Project Closeout Meeting, Project Review Meeting, Sprint Retrospective

Lesson Learning Meeting

Identify and document lessons learned from a completed project.

Project Closeout Meeting

Formalize the completion of the project and document final deliverables.

Project Review Meeting

Assess project performance and identify areas for improvement.

Sprint Retrospective

Reflect on the completed sprint and identify areas for improvement in the next sprint.

COMMONLY USED METHODS – Timebox, Net Promoter Score (NPS)

Timebox

Allocate fixed amounts of time to complete tasks, promoting efficiency and focus.

Net Promoter Score (NPS)

Measures customer loyalty and satisfaction through a simple survey.

COMMONLY USED ARTIFACTS

1

Strategy Artifacts

Documents that define the project's goals, objectives, and vision.

2

Plan

Detailed project plan with timelines, resources, and risks.

3

Hierarchy Charts

Visual representations of project structure and reporting relationships.

4

Baselines

Approved versions of project plans used as a reference point for tracking changes.

5

Visual Data & Information

Charts, diagrams, and matrices that help visualize project data and insights.

6

Reports

Documents that summarize project progress, risks, and issues.

7

Agreements and Contracts

Formal documents that outline legal obligations between parties.

8

Other Artifacts

A variety of other documents, such as meeting minutes, training materials, and communication logs.

Naphtali PM Group

COMMONLY USED ARTIFACTS - Strategy Artifacts

Project Charter

Formal document authorizing the project and defining its scope.

Business Case

Justifies the project and outlines its potential benefits.

Project Management Plan

Overall document outlining the project approach and methodology.

COMMONLY USED ARTIFACTS –

Strategy Artifacts

Business Case

A business case is a value proposition for a proposed project that may include financial and nonfinancial benefits.

Project Vision Statement

This document is a concise, high-level description of the project that states the purpose, and inspires the project team to contribute to the project.

Business Model Canvas

This artifact is a one page visual summary that describes the value proposition, infrastructure, customers, and finances.

Project Brief

A project brief provides a high-level overview
of the goals, deliverables, and processes for
the project.

Naphtali PM Group

COMMONLY USED ARTIFACTS - Plan

Change Control Plan

Establishes the change control board, documents the extent of its authority, and describes how the change control system will be implemented.

Project Management Plan

The project management plan is a document that describes how the project will be executed, monitored and controlled, and closed.

Iteration Plan

This plan is a detailed plan for the current iteration

Naphtali PM Group

COMMONLY USED ARTIFACTS - Plan

Requirement Management Plan

A component of the project or program management plan that describes how requirements will be analyzed, documented, and managed.

Risk Management Plan

This plan is a component of the project, program, or portfolio management plan that describes how risk management activities will be structured and performed.

Release Plan

This plan sets expectations for the dates, features, and/or outcomes expected to be delivered over the course of multiple iterations.

COMMONLY USED ARTIFACTS - Hierarchy Charts

Risk Breakdown Structure

This chart is a hierarchical representation of potential sources of risks.

Product Breakdown Structure

This chart is a hierarchical structure reflecting a product's components and deliverables.

Work Breakdown Structure

This chart is a hierarchical decomposition of the total scope of work to be carried out by the project team to accomplish the project objectives and create the required deliverables.

Organizational Breakdown Structure

This chart is a hierarchical representation of the project organization, which illustrates the relationship between project activities and the organizational units that will perform those activities.

COMMONLY USED ARTIFACTS - Baselines

Schedule Baseline

Approved version of the project schedule used as a reference point for tracking changes.

Cost Baseline

Approved version of the project budget used as a reference point for tracking changes.

Scope Baseline

Approved version of the project scope used as a reference point for tracking changes.

COMMONLY USED ARTIFACTS - Visual Data & Information

Naphtali PM Group

1. **Requirement Traceability Matrix (RTM)**
   Tracks the relationships between requirements and deliverables.
2. **Responsibility Assignment Matrix (RAM)**
   Assigns responsibilities for different project tasks.
3. **S-Curve**
   Visualizes the cumulative cost or effort over the project lifecycle.
4. **Story Map**
   Organizes user stories to show the flow of a user journey.
5. **Throughput Chart**
   Tracks the rate at which work is completed over time.
6. **Velocity**
   Measures the team's productivity and capacity to deliver work.

Naphtali PM Group

COMMONLY USED ARTIFACTS - Visual Data & Information - Requirement Tracebility Matrix, Respionsibility Assignment Matrix (RAM)

Requirement Traceability Matrix (RTM)

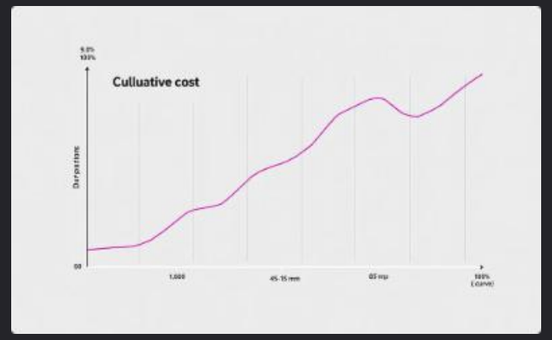
Ensures that all requirements are addressed and implemented in the project.

Responsibility Assignment Matrix (RAM)

Clarifies who is responsible for each task, preventing duplication of effort and promoting accountability.

Naphtali PM Group

COMMONLY USED ARTIFACTS - Visual Data & Information - S-Curve, Story Map, Throughput Chart, Velocity

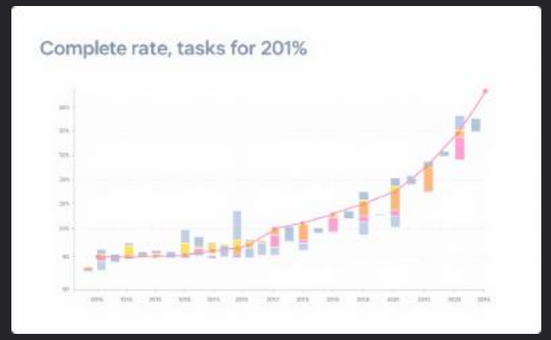


S-Curve

Provides a visual representation of project progress and resource allocation.

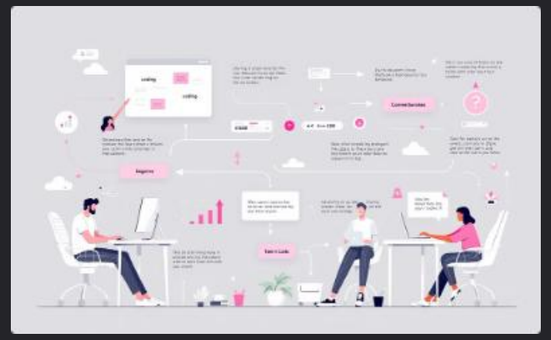
Story Map

Illustrates the flow of user interactions and helps prioritize development efforts.



Throughput Chart

Tracks the team's efficiency and helps identify bottlenecks in the workflow.



Velocity

Measures the team's ability to deliver value and helps estimate future sprint capacity.

Naphtali PM Group

COMMONLY USED ARTIFACTS - Report

Status Report

Provides regular updates on project progress, risks, and issues.

Risk Register

Documents identified risks, their likelihood, impact, and mitigation strategies.

Issue Log

Tracks and manages outstanding issues and their resolution status.

COMMONLY USED ARTIFACTS - Agreements and Contracts

Fixed Price Contracts

This category of contract involves setting a fixed price for a well-defined product, service, or result. Fixed price contracts include firm fixed price (FFP), fixed price incentive (FPIF), and fixed price with economic price adjustment (FP-EPA),

Service Level Agreement (SLA)

Defines the performance standards and expectations for services provided.

Cost-Reimbursable Contracts

This category of contracts involves payments to the seller for actual costs incurred for completing the work plus a free representing seller profit. These contracts are often used when the project scope is not well defined or is subject to frequent change. Cost-Reimbursable contracts include Cost-Plus Aware Fee (CPAF), Cost-Plus Fixed Fee (CPFF), and Cost-Plus incentive (CPIF).

COMMONLY USED ARTIFACTS - Agreements and Contracts

Time & Material (T&M)

This contract establishes a fixed rate, but not a precise statement of work. It can be used for staff augmentation, subject matter expertise, or other outside support.

Service Level Agreement (SLA)

Defines the performance standards and expectations for services provided.

Indefinite Delivery Indefinite Quality (IDIQ)

This contract provides for an indefinite quantity of goods or services, with a stated lower and upper limit, and within a fixed time period. These contracts can be used for architectural, engineering, or information technology engagements.

Naphtali PM Group

COMMONLY USED ARTIFACTS - Other Artifacts

User Story

A user story is a brief description of an outcome for a specific user, which is a promise of a conversation to clarify details

Metric

Metrics describe an attribute and how to measure it

Activity List

This document provides a tabulation of schedule activities that shows the activity description, activity identifier, and a sufficiently detailed scope of work description so project team members understand what work is to be performed.

Naphtali PM Group

COMMONLY USED ARTIFACTS - Other Artifacts

Project Team Charter

records the project team values, agreements, and operating guidelines, and establishes clear expectations regarding acceptable behavior by project team members.

Project Calendar

This calendar identifies working days and shifts that are available for scheduled activities.

Bid Documents

Depending on the goods or services needed, bid documents can include, among others:

* Request for information (RFI),
* Request for quotation (RFQ), and
* Request for proposal (RFP).

Project Closure Report

Summarizes project outcomes, lessons learned, and recommendations for future projects.

Naphtali PM Group

Summary and Key Takeaways

- **Models, methods, and artifacts are essential tools for project success.**

  They provide structure, consistency, and clarity for understanding, planning, and executing projects.

- **Different models, methods, and artifacts are suitable for various project types and situations.**

  Select the appropriate tools to match the project's complexity and requirements.

- **Integrating agile and waterfall approaches can provide flexibility and adaptability to projects.**

  Choose a hybrid approach that leverages the strengths of both methodologies.