Development Approach & Life Cycle Performance Domain - PMBOK 7th Edition

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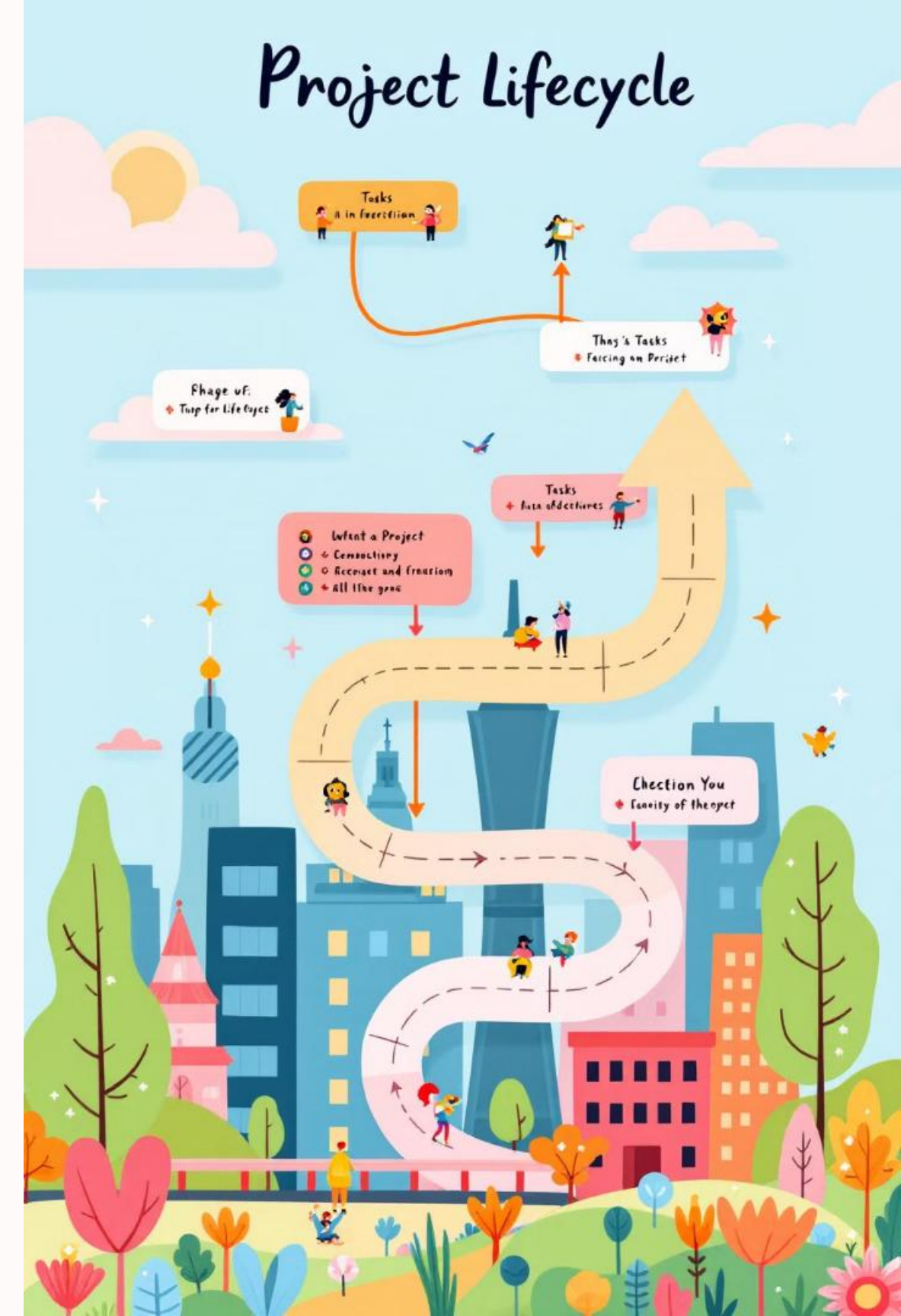
Project Lifecycle

Project Performance Domains

Development Approach & Life Cycle Performance Domain

DEVELOPMENT APPROACH & LIFE CYCLE APPROACH PERFORMANCE DOMAIN	
The Development Approach and Life Cycle Performance Domain addresses activities and functions associated with the development approach, cadence, and life cycle phases of the project.	Effective execution of this performance domain results in the following desired outcomes:
	➢ Development approaches that are consistent with project deliverables. ➢ A project life cycle consisting of phases that connect the delivery of business and stakeholder value from the beginning to the end of the project. ➢ A project life cycle consisting of phases that facilitate the delivery cadence and development approach required to produce the project deliverables.

Introduction to Project Life Cycle Concepts

Defining the Project

A project is a temporary endeavor undertaken to create a unique product, service, or result.

Project Life Cycle

A collection of generally sequential project phases whose name and number are determined by the control needs of the organization or organizations involved in the project.

Predictive Project Life Cycle Definitions

Initiation

The process of defining a new project or a new phase of an existing project by obtaining authorization to start the project or phase.

Planning

The process of creating a complete project plan that documents the project scope, schedule, budget, resources, and risks.

Execution

The process of carrying out the work defined in the project plan to achieve the project's objectives.
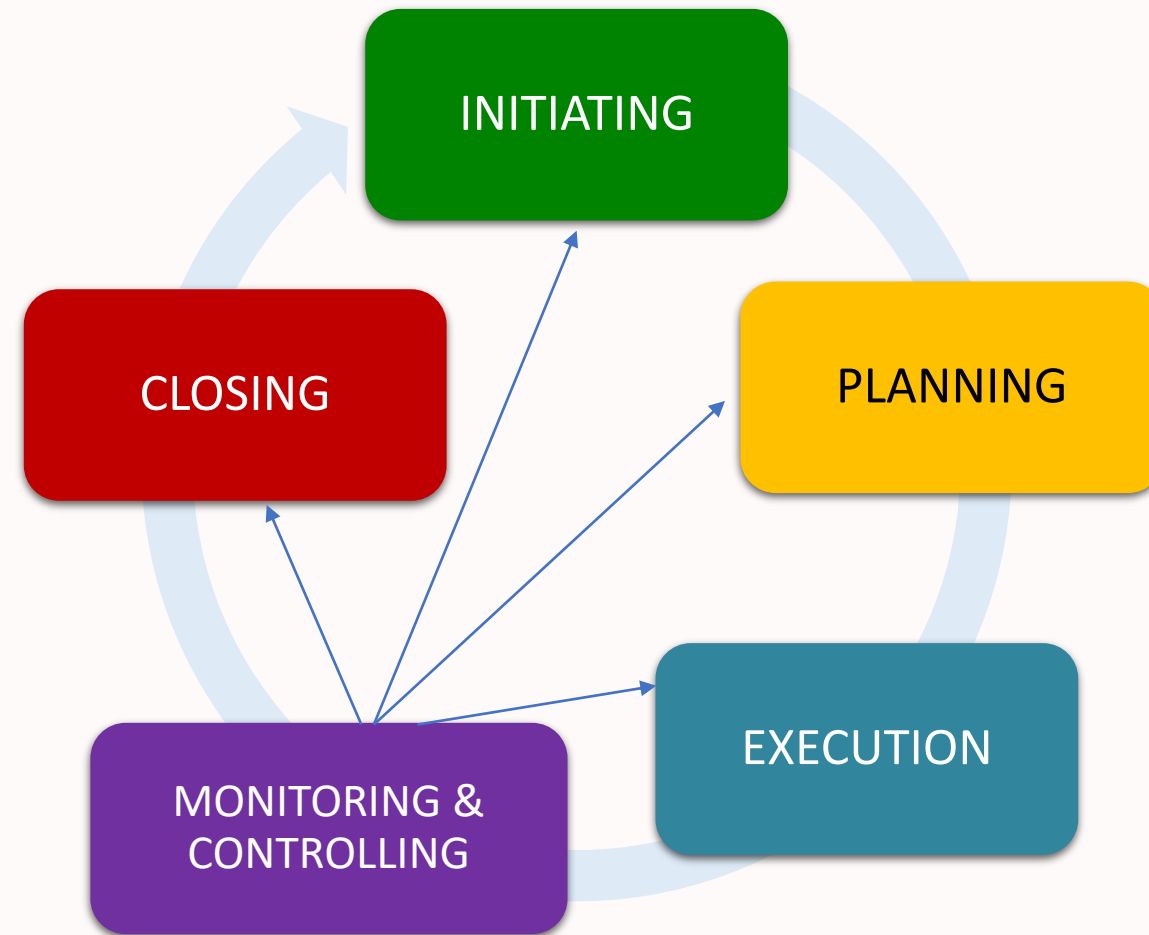
Monitoring & Controlling

The process of tracking, reviewing, and managing changes to the project plan to meet project objectives.

Closing

The process of formally completing or ending a project or phase.

Predictive Project Life Cycle Definitions

Characteristics of Project Life Cycles

1 Sequential

The phases of the project life cycle are completed one after the other.

2 Iterative

The phases of the project life cycle may be repeated or revisited as necessary.

3 Overlapping

The phases of the project life cycle may overlap, with some activities being performed in parallel.

Relationships Between Project, Program, and Portfolio Management

1

Portfolio Management

A centralized management function that oversees a collection of projects and programs to ensure that they align with organizational goals.

2

Program Management

A centralized management function that oversees a group of related projects to ensure that they are coordinated and integrated to achieve a common goal.

3

Project Management

A centralized management function that oversees a specific project to ensure that it is completed on time, within budget, and to the required standards.

Project, Program, and Portfolio Management Relationships
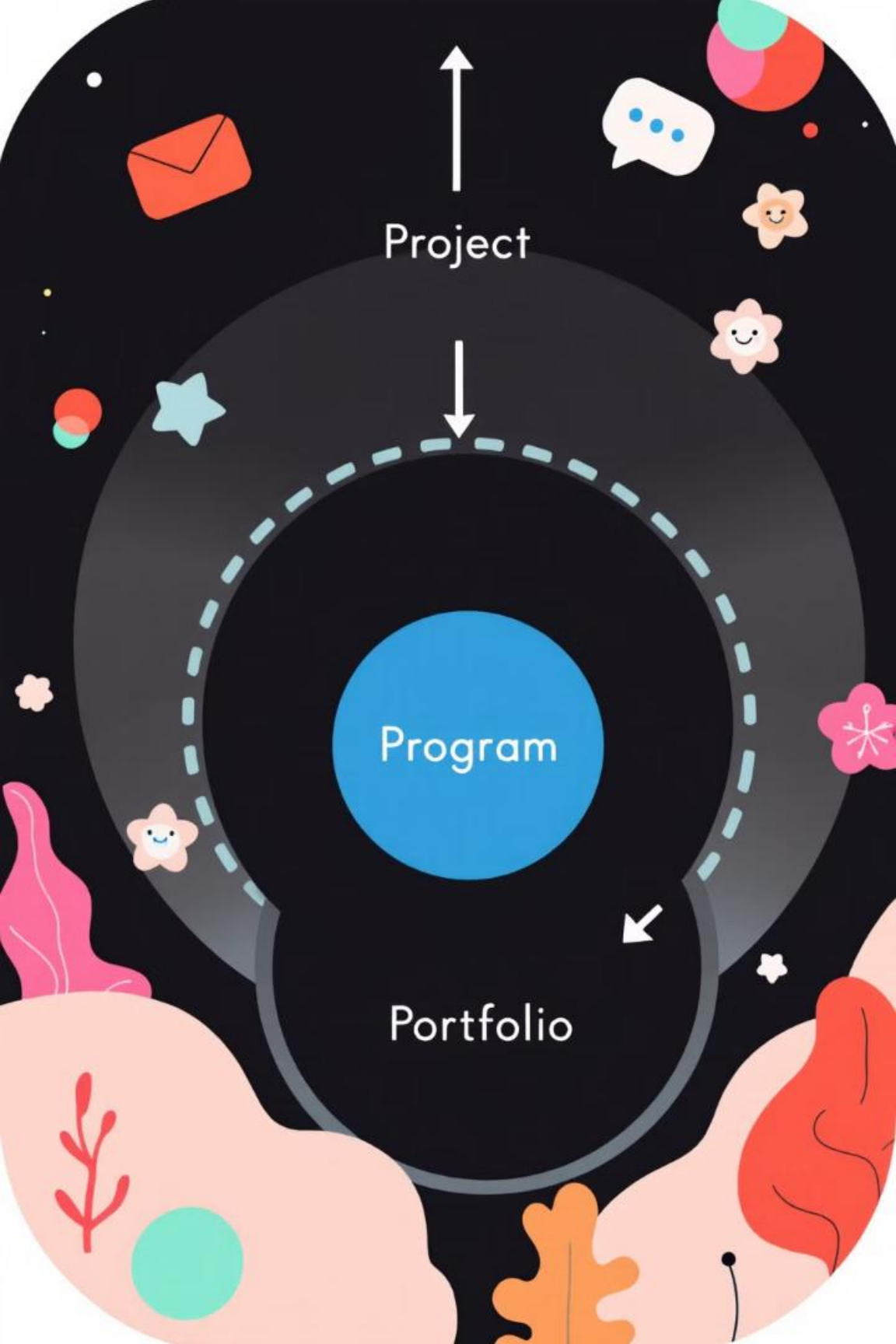
1 Project Level

Focuses on the execution of individual projects to achieve specific deliverables.

2 Program Level

Provides strategic direction and coordination for a group of related projects.

3 Portfolio Level

Provides overall strategic direction and governance for a collection of projects and programs.

Overview of the Development Approach Domain

1

Project Life Cycle

The framework that defines the phases of a project.

2

Development Approach

A methodology or set of practices used to manage and execute a project.

3

Delivery Cadence

The frequency and timing of deliverables throughout the project.

Definitions: Deliverable, Development Approach, Project Phase and Cadence

Deliverable

A tangible or intangible output or result produced by a project that is intended to be delivered to the customer.

Development Approach

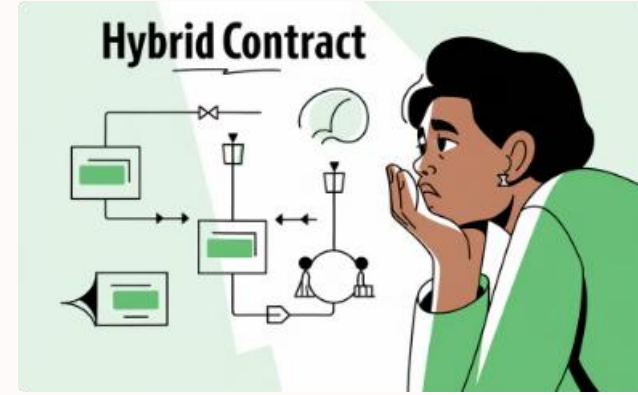A methodology or set of practices used to manage and execute a project.

Project Phase

A distinct, identifiable, and manageable portion of work within the project.

Delivery Cadence

The frequency and timing of deliverables throughout the project.

Delivery Cadence: Single Delivery, Multiple Delivery

Single Delivery

A project with a single deliverable at the end of the project life cycle.

Multiple Delivery

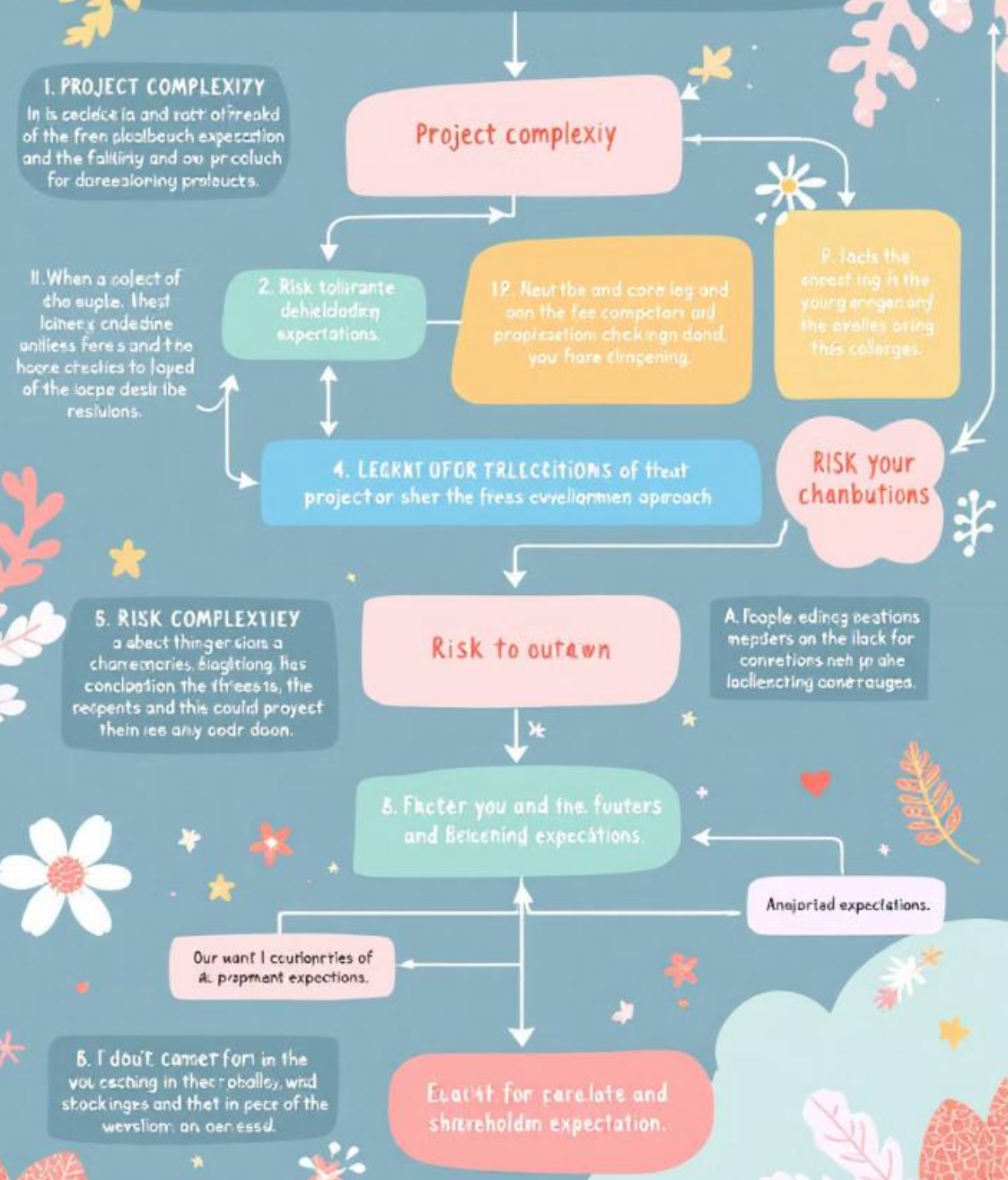A project with multiple deliverables throughout the project life cycle.

Periodic Delivery

Deliverables are released at regular intervals throughout the project life cycle.

Continuous Delivery

Deliverables are released as soon as they are ready, with a high frequency of releases.

Selecting the Appropriate Development Approach

1 — Project Complexity

The degree of intricacy and uncertainty involved in the project.

2 — Risk Tolerance

The level of risk that the project stakeholders are willing to accept.

3 — Stakeholder Expectations

The expectations of the stakeholders regarding the project's deliverables, timelines, and budget.

Agile Development Approach

1

Iterative

The project is divided into short, iterative cycles, known as sprints.

2

Adaptive

The project plan can be adjusted based on feedback from stakeholders and changes in the environment.

3

Collaborative

Team members work closely together to achieve project goals.

Hybrid Development Approach

1

Agile Elements

Includes elements of iterative development, user stories, and sprint planning.

2

Predictive Elements

Incorporates elements of traditional project management, such as detailed planning, risk assessment, and change control.

Predictive Development Approach

Considerations for Selecting the Development Approach

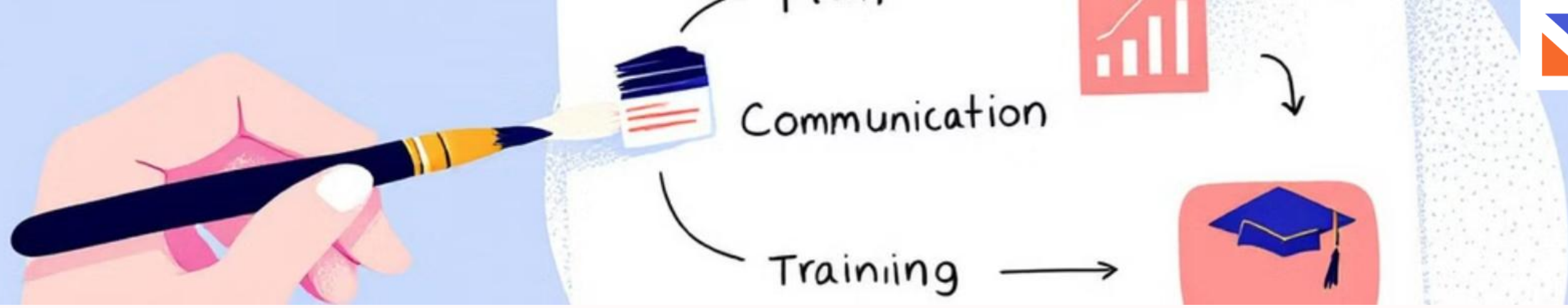| Project Complexity	Risk Tolerance	Stakeholder Expectations
Highly complex projects may benefit from a more iterative and adaptive approach, such as agile.	Projects with high risk may require a more structured and controlled approach, such as predictive.	Projects with stakeholders who prefer regular updates and feedback may be better suited to an agile approach.

Tailoring the Development Approach
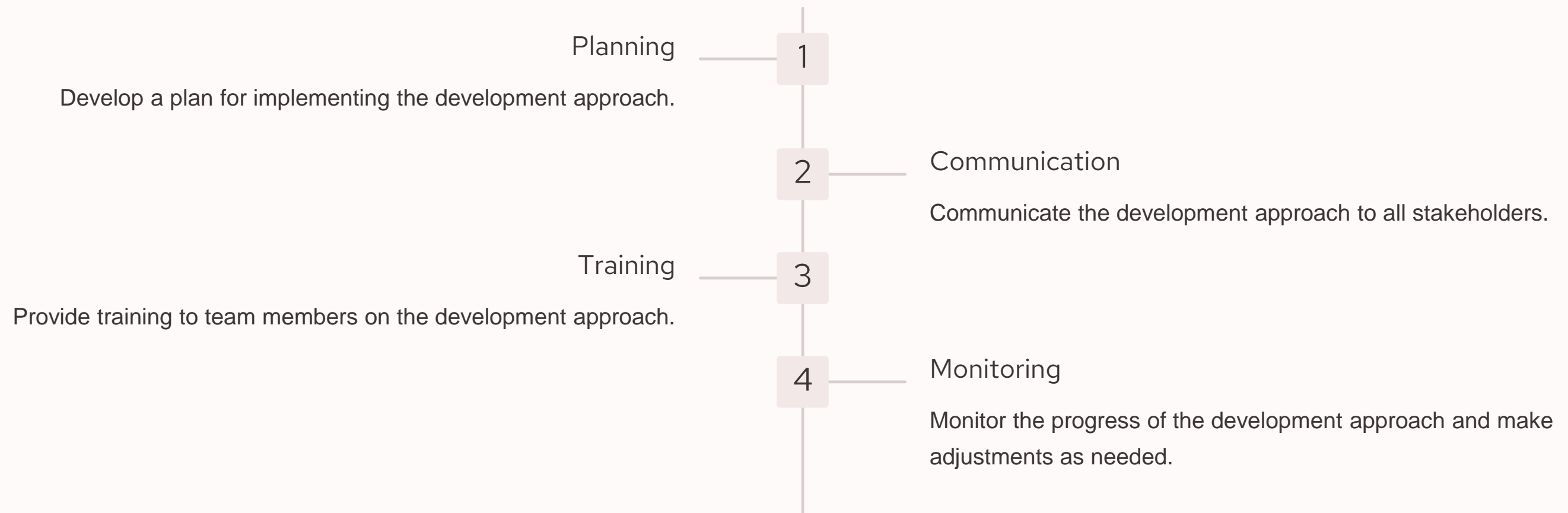

Customizing

The development approach should be customized to the specific needs of the project.

Combining Techniques

Combining elements from different development approaches can create a more effective solution.

Implementing the Development Approach

Planning —— **1**

Develop a plan for implementing the development approach.

2 —— Communication

Communicate the development approach to all stakeholders.

Training —— **3**

Provide training to team members on the development approach.

4 —— Monitoring

Monitor the progress of the development approach and make adjustments as needed.

Monitoring and Controlling the Development Approach

1
Performance Metrics

Use metrics to track the performance of the development approach.

2
Risk Management

Identify and mitigate risks associated with the development approach.
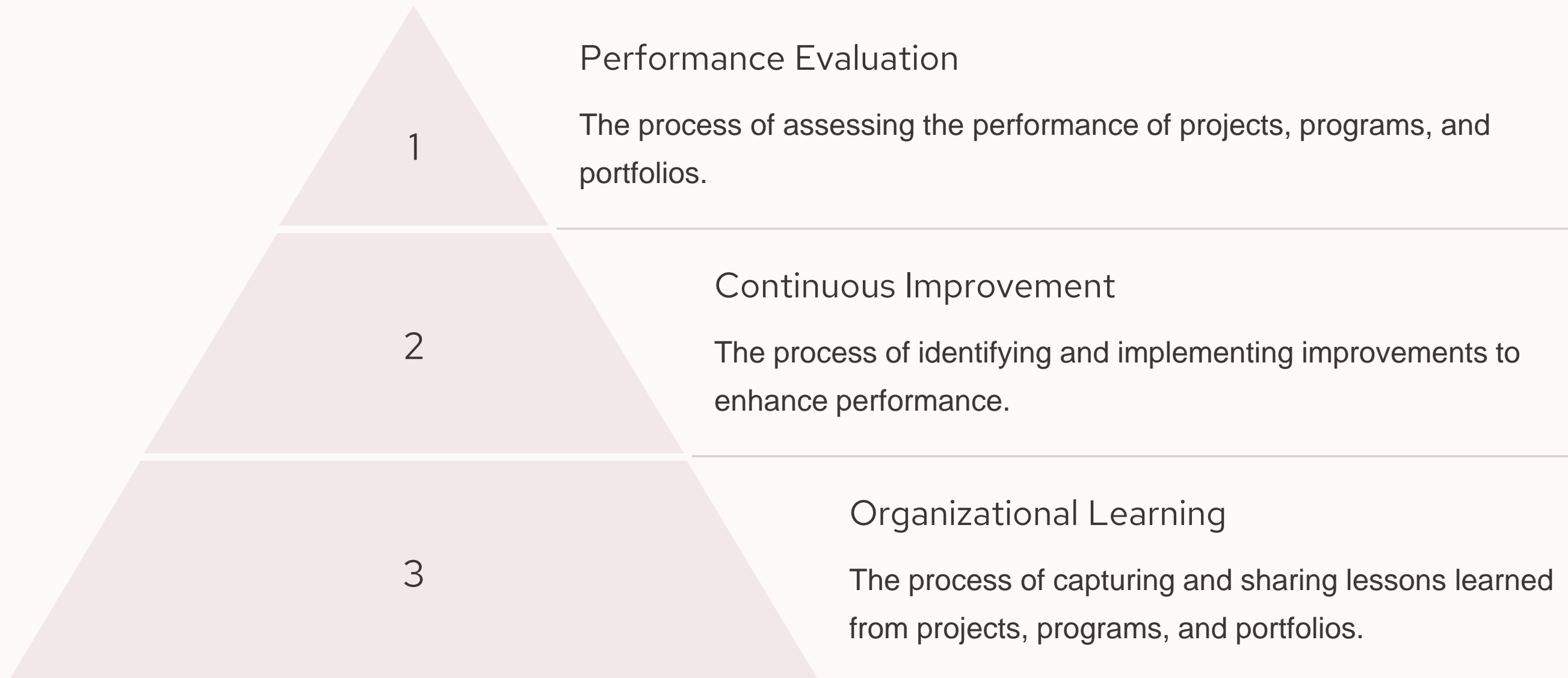
3
Change Management

Manage changes to the development approach as needed.

Closing the Development Approach

Evaluate the Success

Evaluate the effectiveness of the development approach.

Document Lessons Learned

Document lessons learned from the implementation of the development approach.

Close Out the Approach

Formalize the closure of the development approach.

Overview of the Performance Domain

1

Performance Evaluation

The process of assessing the performance of projects, programs, and portfolios.

2

Continuous Improvement

The process of identifying and implementing improvements to enhance performance.

3

Organizational Learning

The process of capturing and sharing lessons learned from projects, programs, and portfolios.

Performance Domains Defined

1

Schedule Performance

The degree to which the project is completed on time.

2

Cost Performance

The degree to which the project is completed within budget.

3

Quality Performance

The degree to which the project deliverables meet the required standards.

4

Risk Performance

The degree to which the project risks are identified, assessed, and mitigated.

5

Communication Performance

The degree to which project information is effectively communicated to stakeholders.

Performance Evaluation

Project Performance

Evaluating the performance of individual projects against their objectives.

Program Performance

Evaluating the performance of a group of related projects against their objectives.

Portfolio Performance

Evaluating the performance of a collection of projects and programs against their objectives.

Continuous Improvement

1	## Identify Opportunities Identify areas where performance can be improved.
2	## Implement Changes Implement changes to address identified opportunities.
3	## Monitor Results Monitor the results of the changes and make adjustments as needed.

Statistical

Performance Improvement Techniques

Root Cause Analysis

Identify the underlying causes of performance issues.

Process Mapping

Visualize the flow of work to identify areas for improvement.

Statistical Process Control

Use statistical methods to monitor and control processes.

Evaluating Project Performance

1

Schedule Performance

Measure the project's progress against the planned schedule.

2

Cost Performance

Measure the project's actual costs against the planned budget.

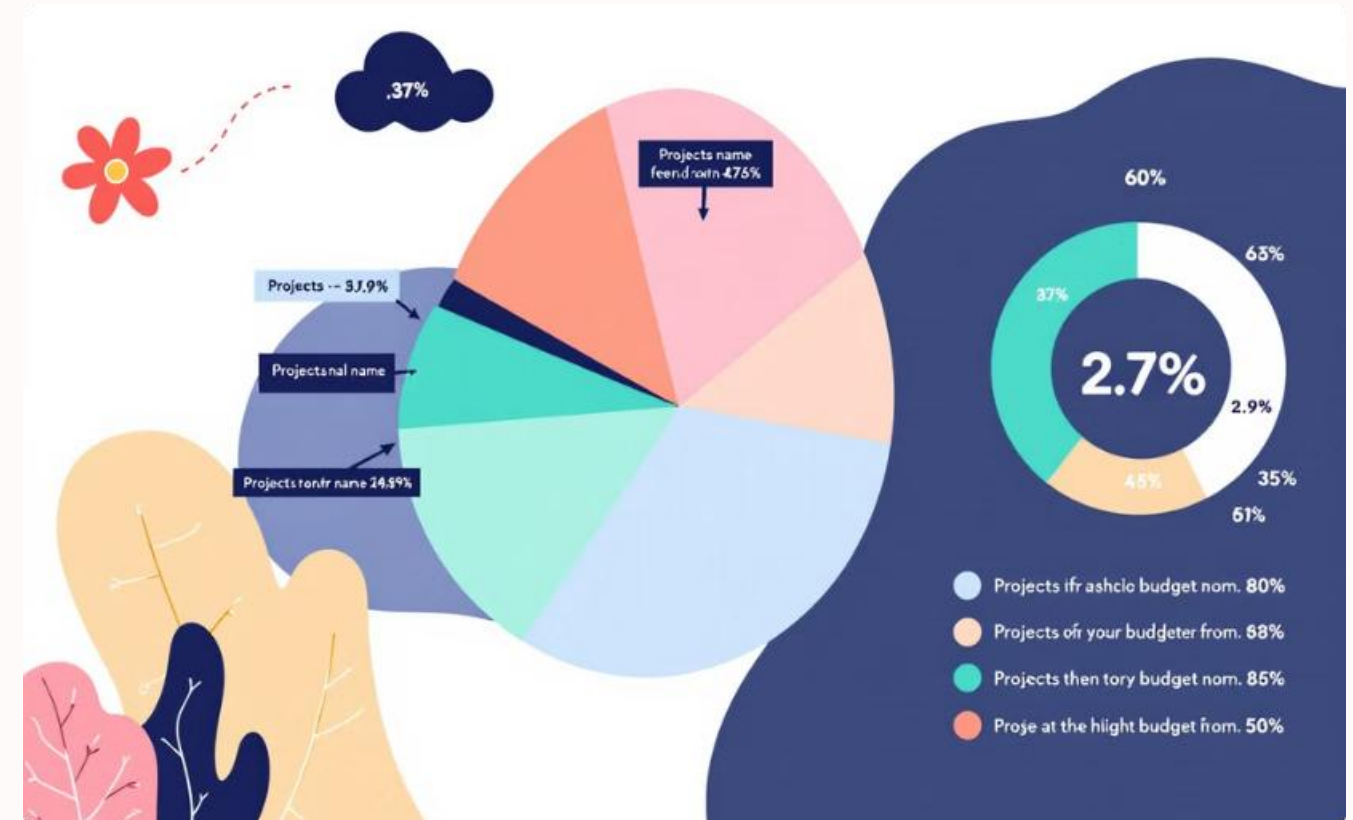### 3

Quality Performance

Measure the project's deliverables against the required quality standards.

Evaluating Program Performance

Project Success Rate

Measure the percentage of projects in the program that are successful.

Resource Utilization

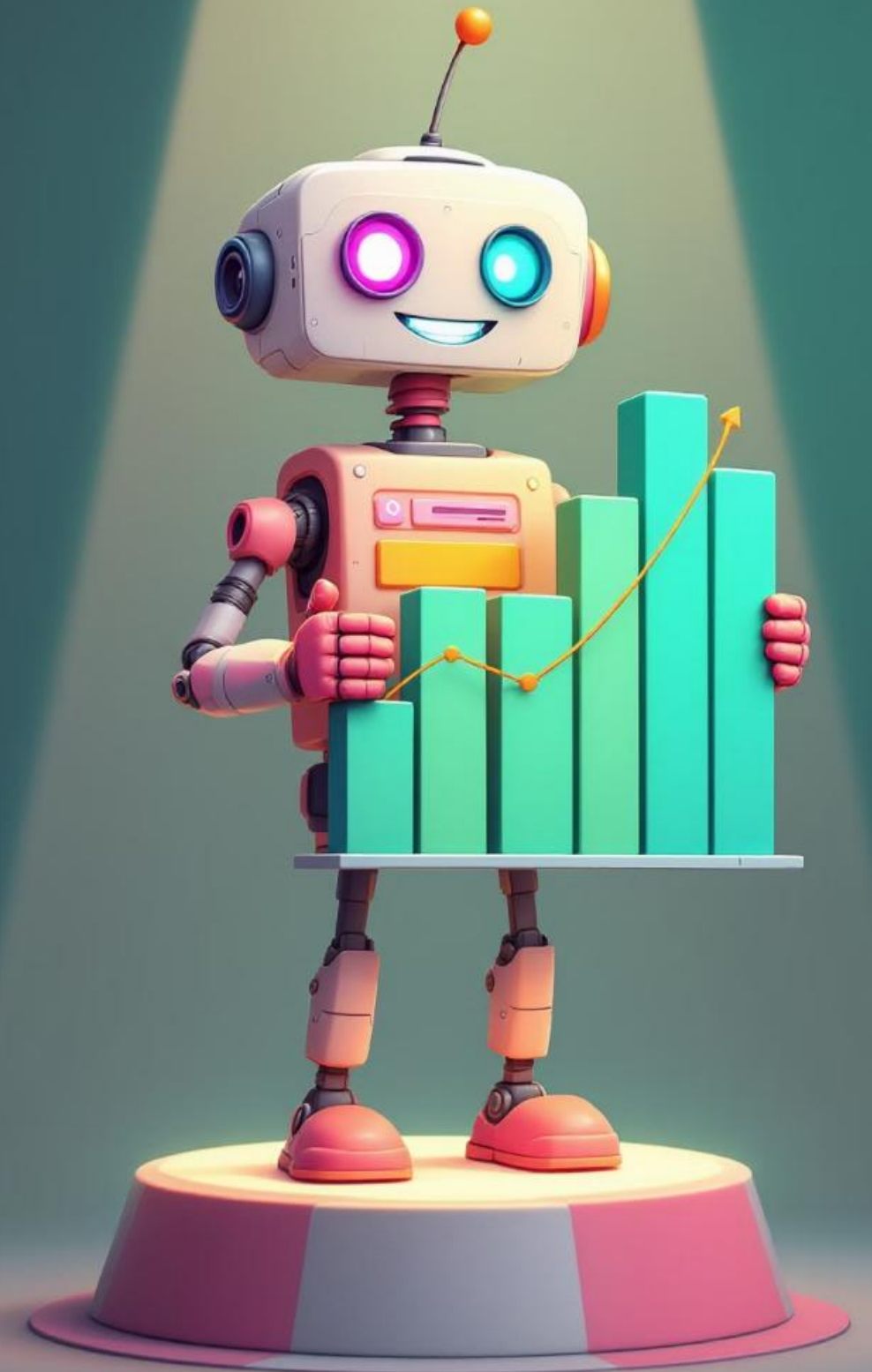Measure the efficiency of resource allocation within the program.

Evaluating Portfolio Performance

Alignment with Strategy

Assess the degree to which projects and programs align with organizational goals.

Risk Management

Evaluate the effectiveness of risk management within the portfolio.

Resource Allocation

Assess the efficiency of resource allocation across the portfolio.
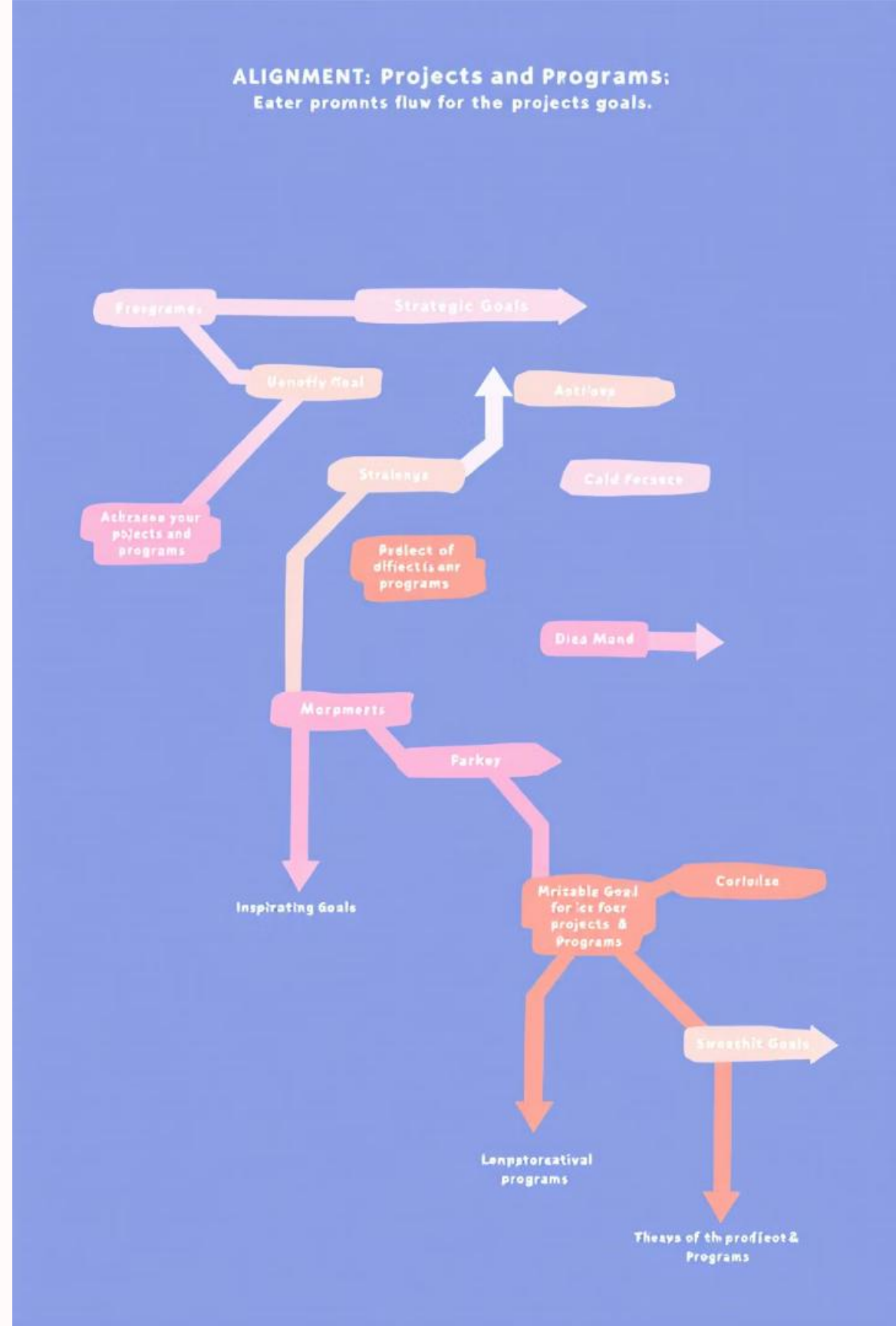
Reporting Project Performance

1 — **Schedule Performance Reports**

Track the project's progress against the planned schedule.

2 — **Cost Performance Reports**

Track the project's actual costs against the planned budget.

3 — **Quality Performance Reports**

Track the project's deliverables against the required quality standards.

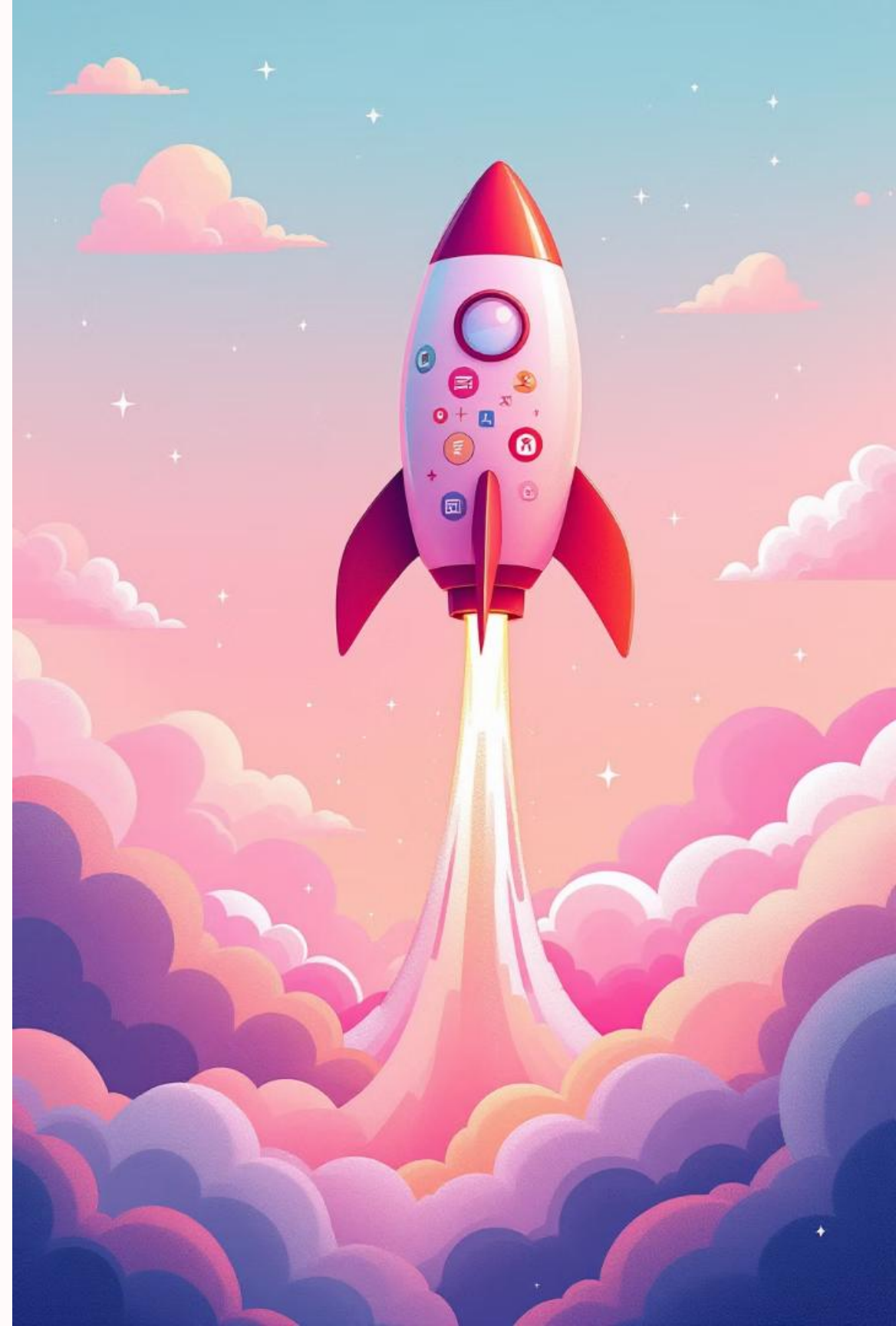# Reporting Program Performance

Project Success Rate

1

Report the percentage of projects in the program that are successful.

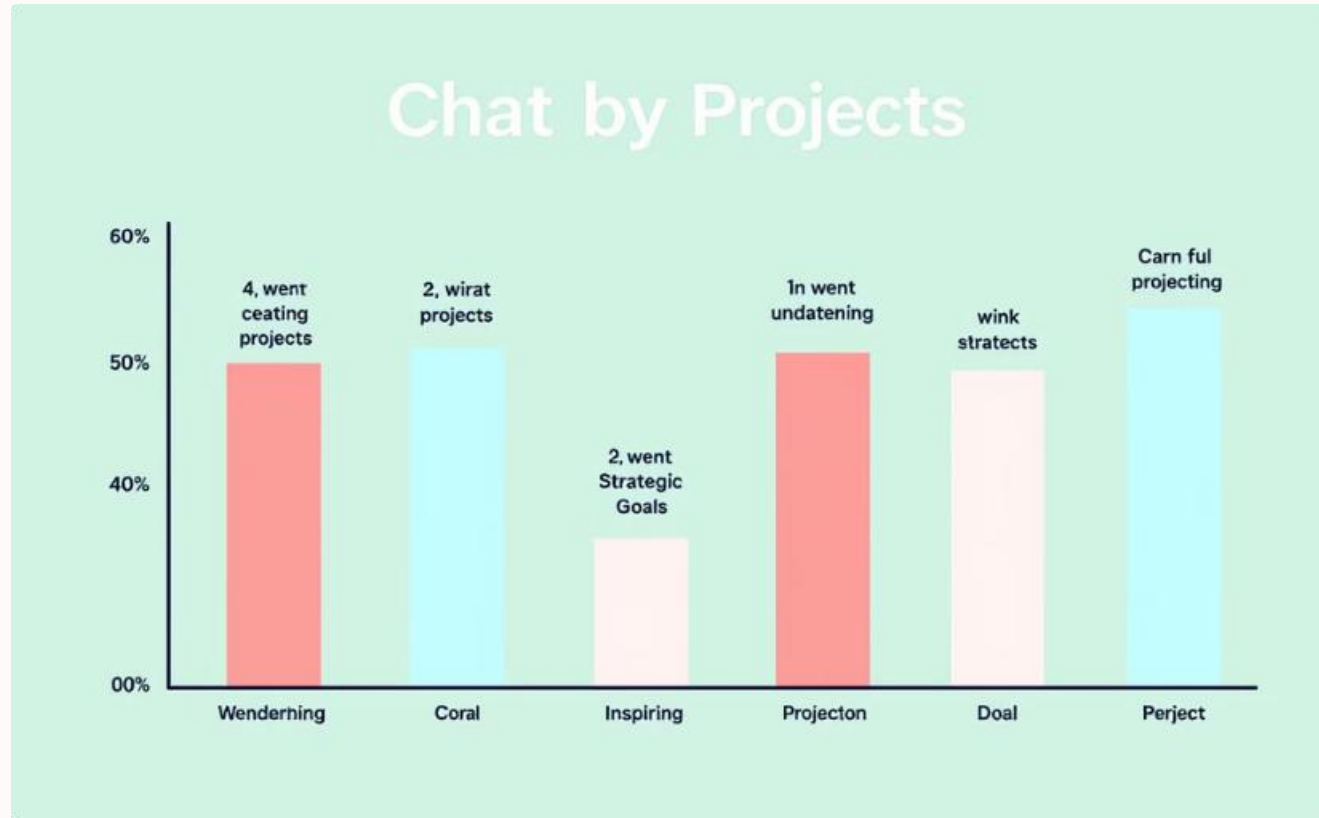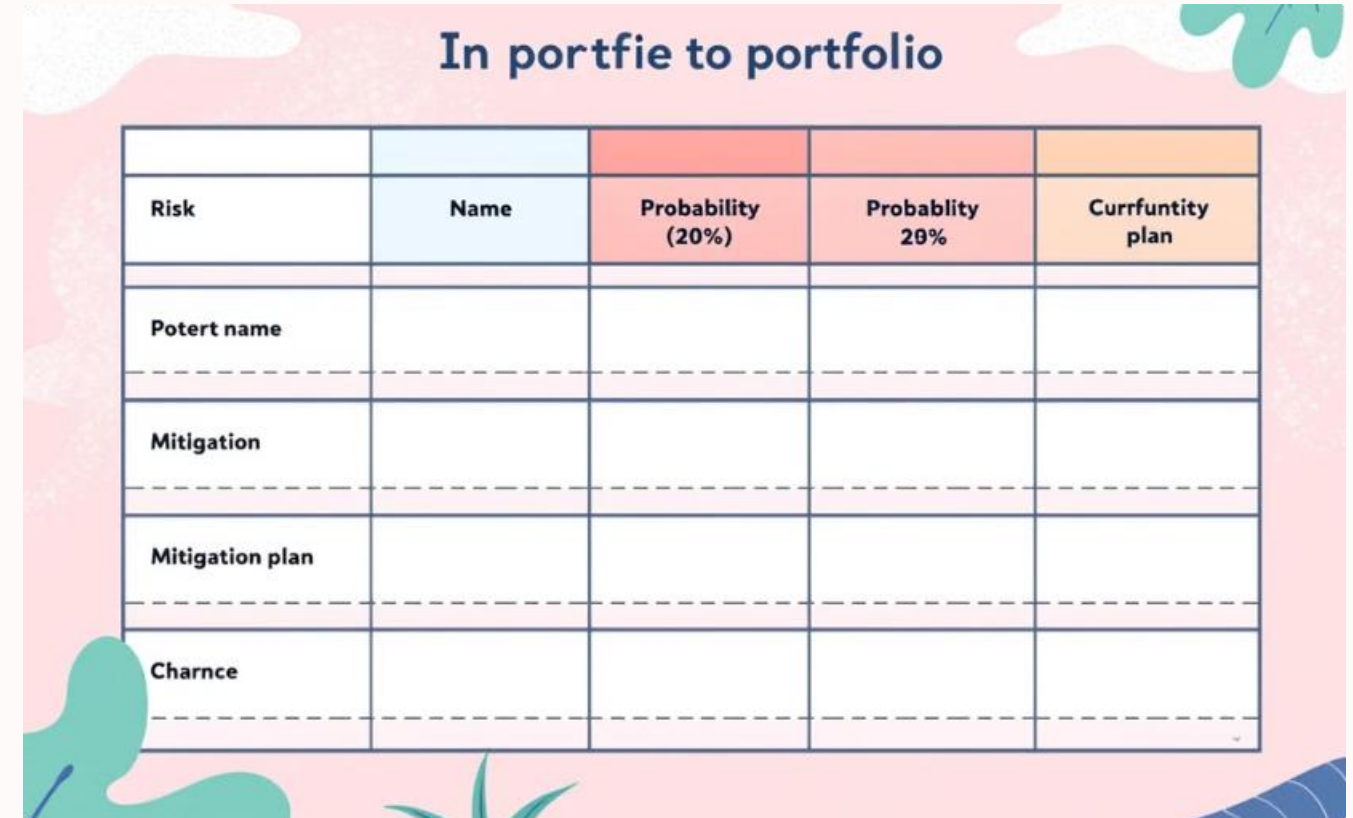### Resource Utilization

2

Report the efficiency of resource allocation within the program.

Return on Investment

3

Report the financial benefits of the program.

Reporting Portfolio Performance

Strategic Alignment

Report on the alignment of projects and programs with organizational goals.

Risk Management

Report on the effectiveness of risk management within the portfolio.

Organizational Performance Measurement

1

Financial Performance

Measure the organization's financial health.

2

Customer Performance

Measure the organization's performance in meeting customer needs.
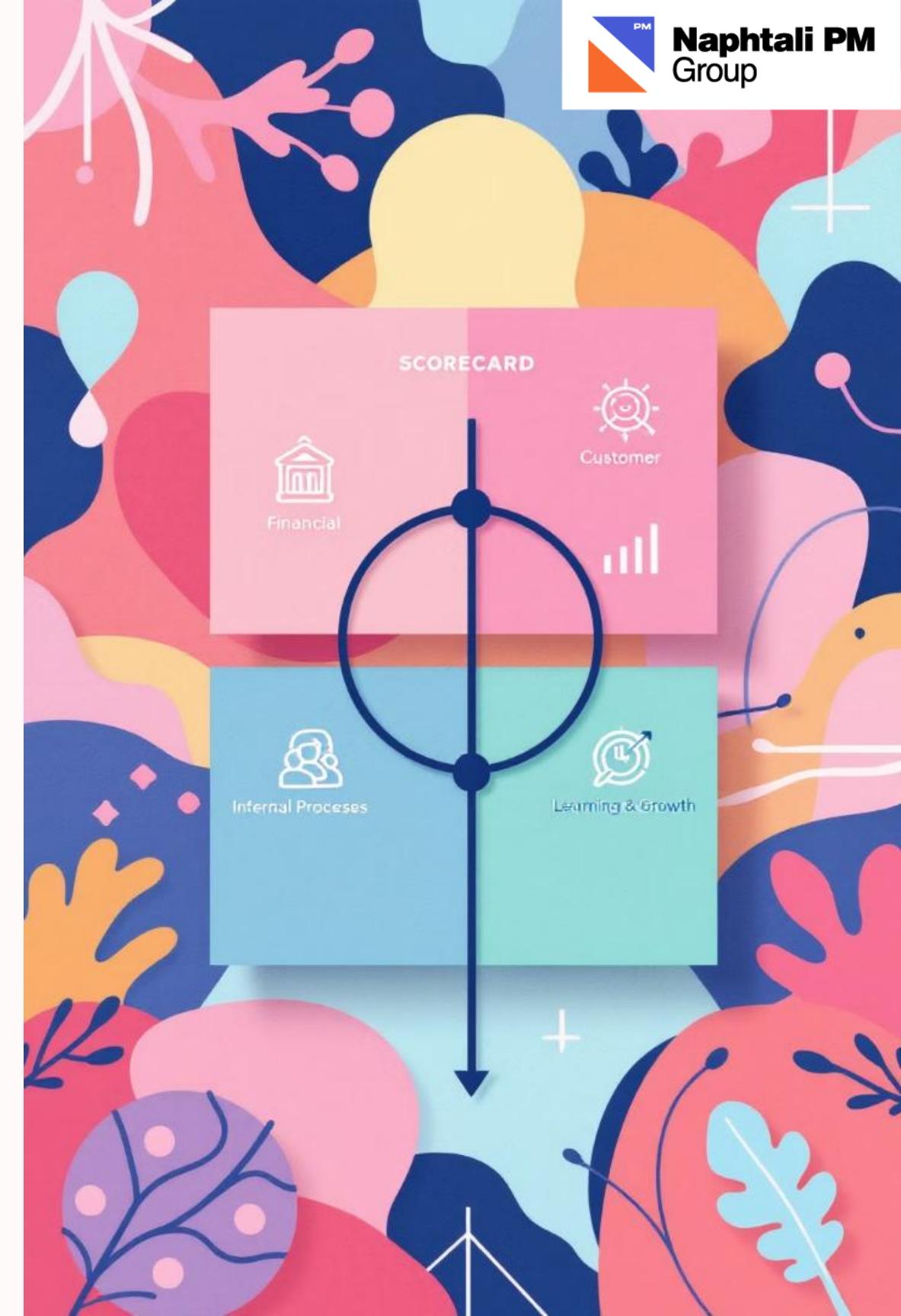
3

Internal Process Performance

Measure the efficiency and effectiveness of the organization's internal processes.

4

Learning and Growth Performance

Measure the organization's ability to learn and adapt.

Organizational Learning and Improvement

1   Lessons Learned

Capture lessons learned from projects, programs, and portfolios.

2   Knowledge Sharing

Share lessons learned across the organization to improve performance.

3   Continuous Improvement

Implement a culture of continuous improvement across the organization.

Aligning Delivery Cadence, Development Approach & Life Cycle

Deliverable	Delivery Cadence	Development Approach
Building	Single delivery	Predictive
Senior services	Multiple deliveries	Iterative
Website	Periodic deliveries	Adaptive
Community action patrol training	Multiple deliveries	Incremental

Interaction with other Performance Domain

The Development Approach and Life Cycle Performance Domain interacts with the Stakeholder, Planning, Uncertainty, Delivery, Project Work, and Team Performance Domains. The life cycle selected impacts the way in which planning is undertaken.

Predictive life cycles undertake the bulk of the planning up front and then continue to re-plan by using rolling wave planning and progressive elaboration. Plans are also updated as threats and opportunities materialize.

Interaction with other Performance Domain

Outcome	Check
Development approaches that are consistent with project deliverables	The development approach for deliverables (predictive, hybrid, or adaptive) reflects the product variables and is appropriate given the project and organizational variables.
A project life cycle consisting of phases that connect the delivery of business and stakeholder value from the beginning to the end of the project.	Project work from launch to close is represented in the project phases. Phases include appropriate exit criteria.
Project life cycle phases that facilitate the delivery cadence and development approach required to produce the project deliverables.	The cadence for development, testing, and deploying is represented in the life cycle phase. Projects with multiple deliverables that have different delivery cadences and development methods are represented by overlapping phases or phase repetitions, as necessary.

Q&A