Project Life Cycle

by

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Prayer

Dear Lord,
We come before You today with grateful hearts as we begin this activity. We thank You for this opportunity to work together in unity, with the common goal of improving our selves, improving the operational efficiency of the business we represent, and improving the services we provide.
Bless our Team with wisdom, clarity, and patience, that this activity may be conducted with fairness, integrity, and respect. Grant us open minds and cooperative spirits so that we may see opportunities for growth and improvement, not as challenges, but as blessings that will help us serve our customers better.
May this activity be a source of learning, collaboration, and continuous improvement for our Team. We entrust this day to You, Lord, and ask for Your guidance in every step of this activity.
All these we pray, in our Lord's name. **Amen.**

Topics to be covered:

1. Project Life Cycle
2. Project Phase
3. Project development approaches
4. Considerations for selecting a development approach
5. Delivery Cadence
6. Project Management Focus Areas (formerly known as Process Groups)

1. The Project Life Cycle

A project life cycle is the series of phases that a project passes through from its start to its completion. It provides the basic framework for managing the project.

Key Characteristics:

1. Phases are sequential, but may overlap.
2. Each phase has a defined start and end.
3. Phases typically culminate in a review or gate to decide whether to continue the project.
4. The project team and stakeholders evolve through the life cycle.

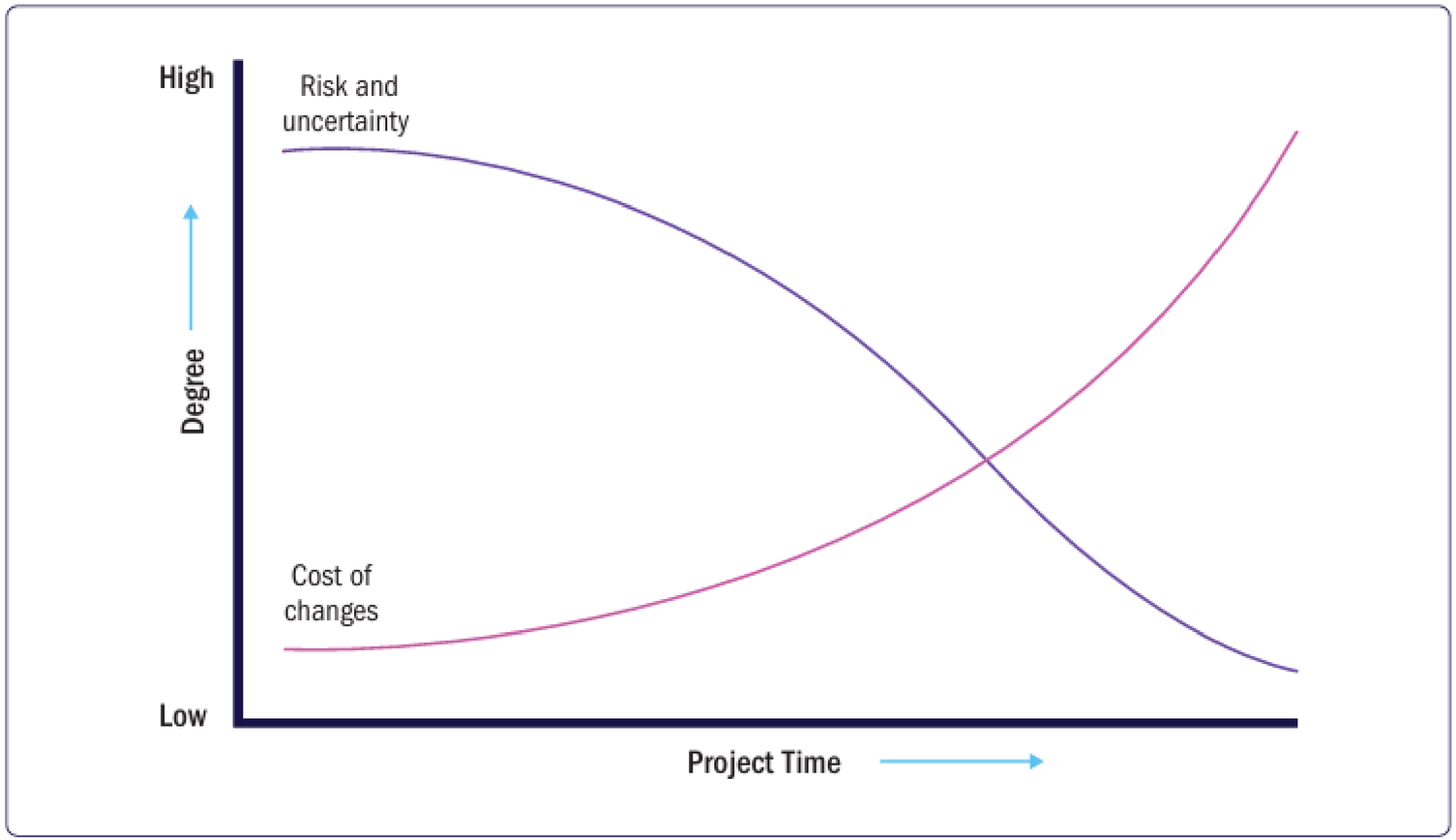
2. Project Phases

A **project phase** is a major division of the project life cycle made up of logically related activities, usually ending in a deliverable, outcome, or a review point. Project phases help organize and control the work. They can be sequential, overlap, or transition into one another, and they often have defined entry and exit criteria.

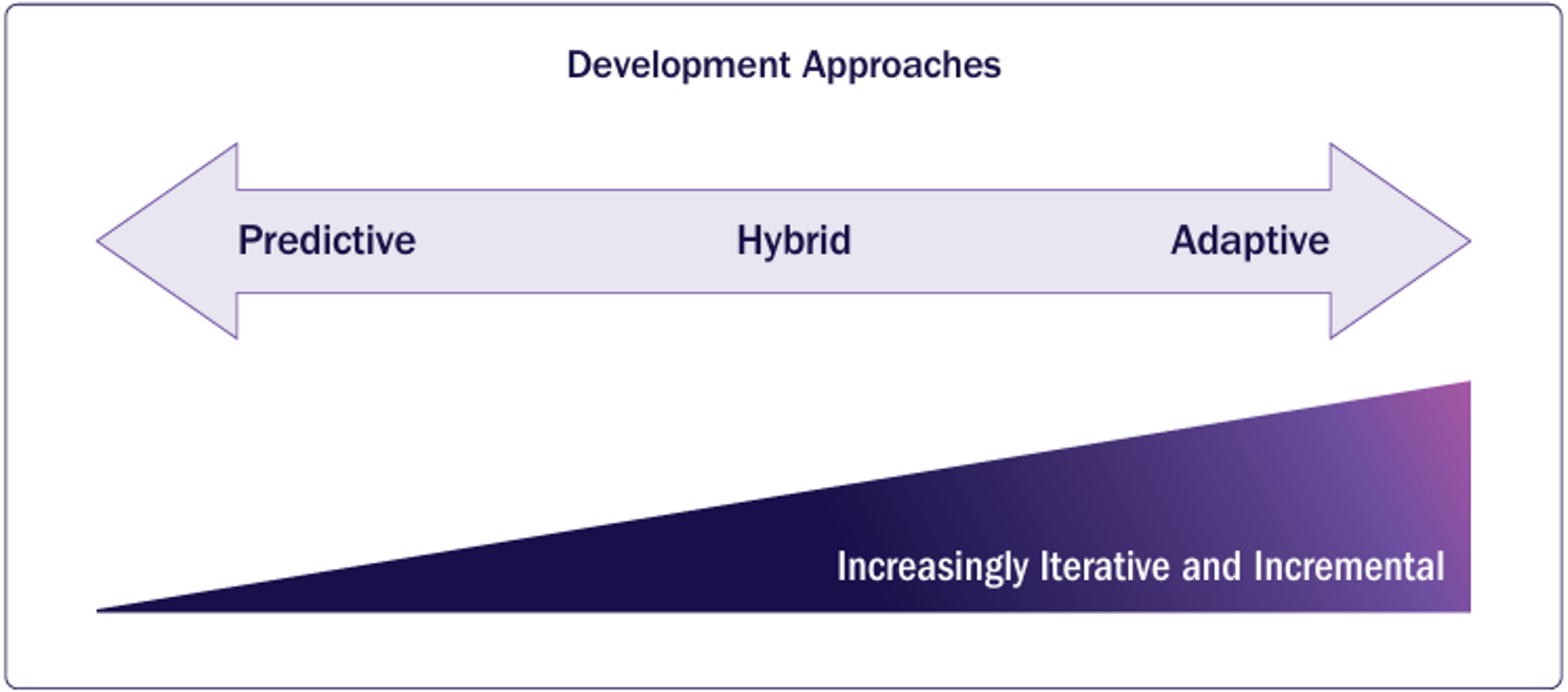
Typical Phases (General):

1. Starting the project (Initiation)
2. Organizing and preparing (Planning)
3. Carrying out the work (Execution)
4. Securing project closure (Closing)
5. *Often intertwined with Execution: Monitoring & Controlling*

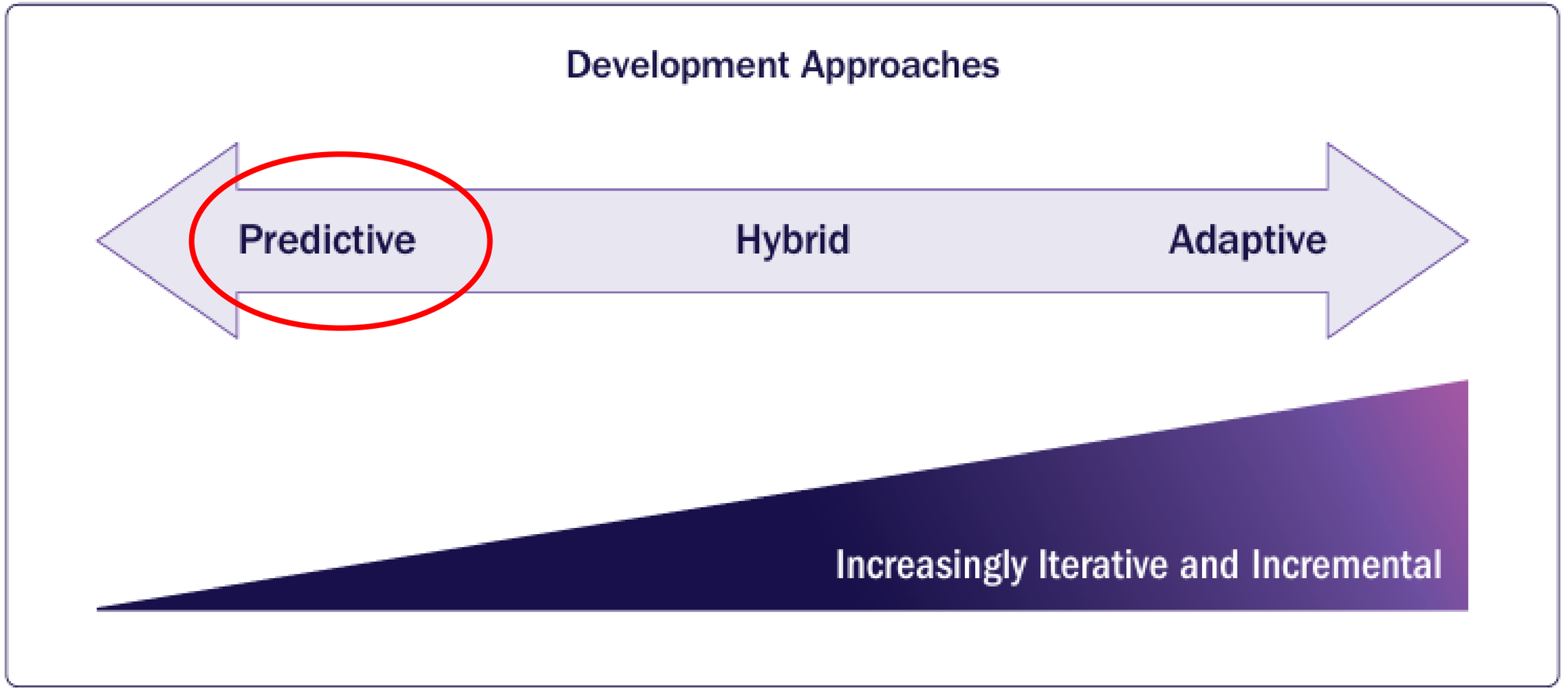
Impact of Risk/Uncertainty and Cost of Changes over time



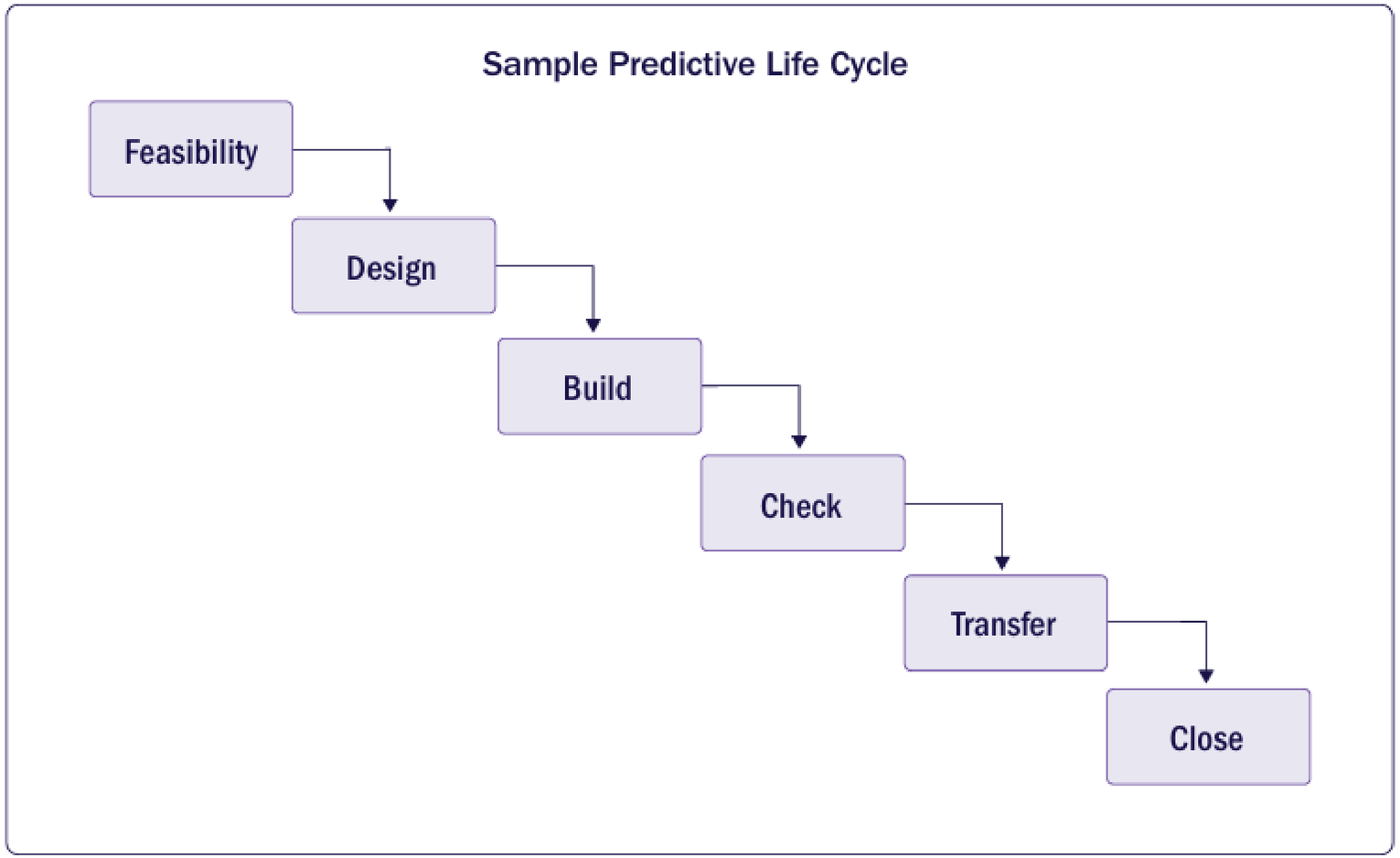
3. Development Approaches



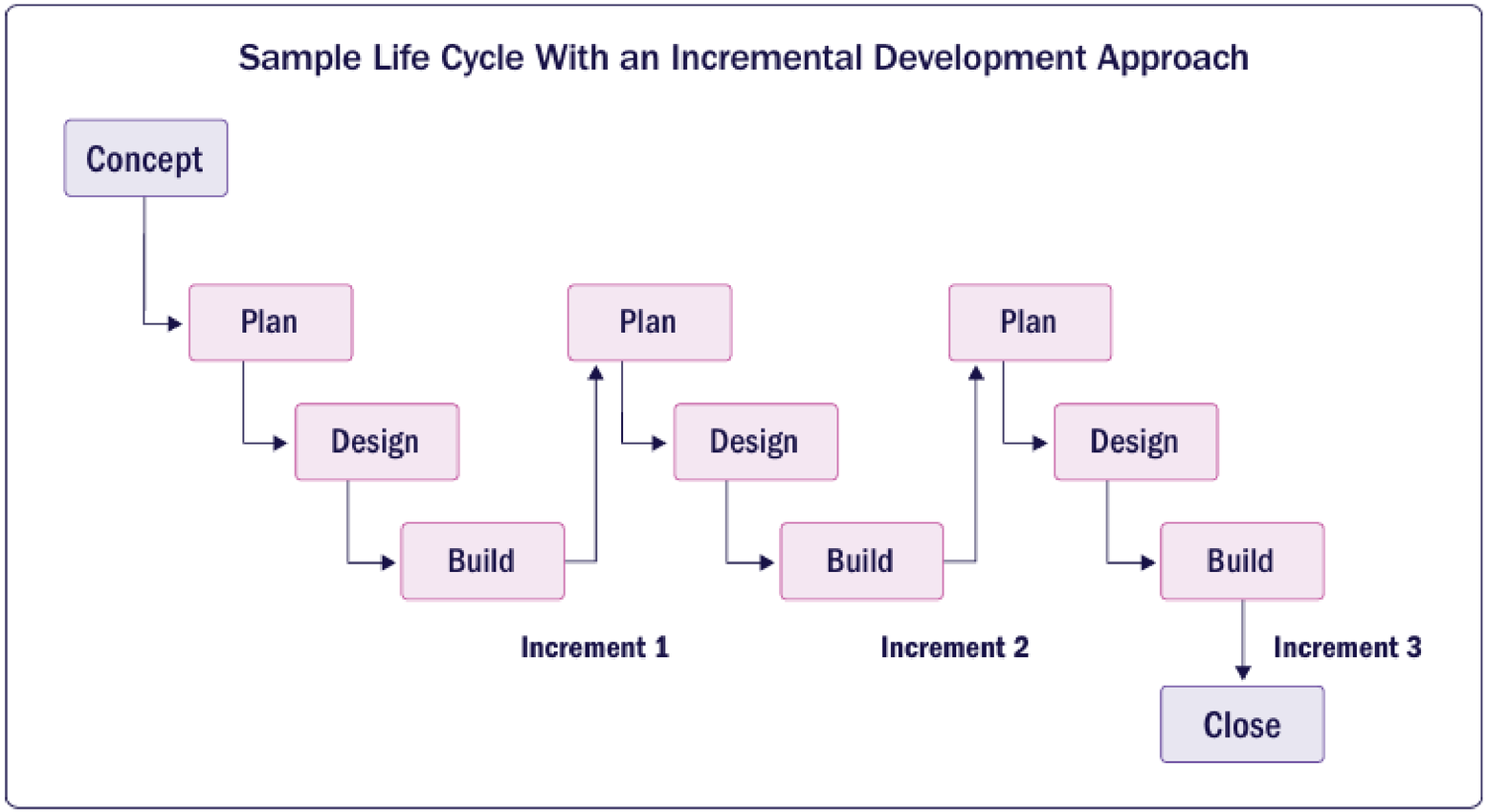
Predictive Approaches



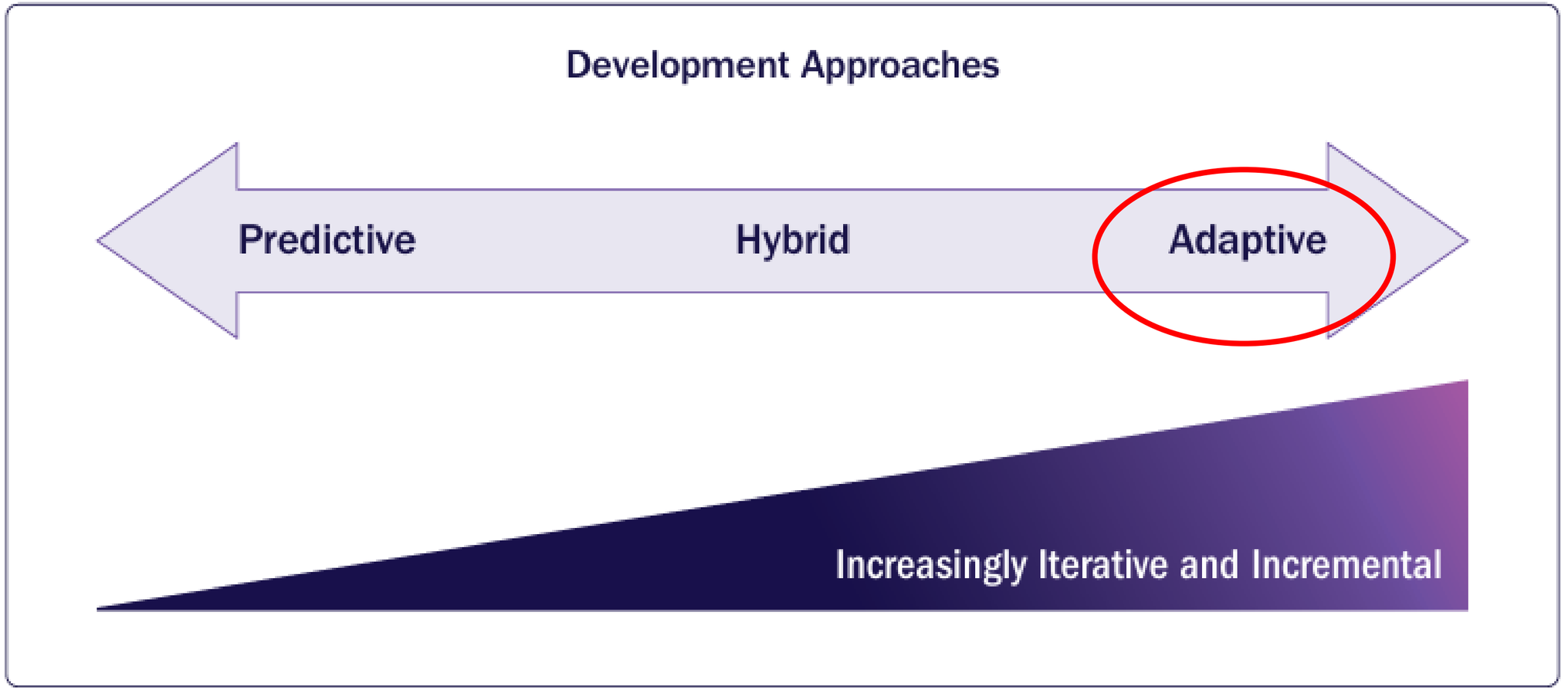
Sample Predictive Life Cycle



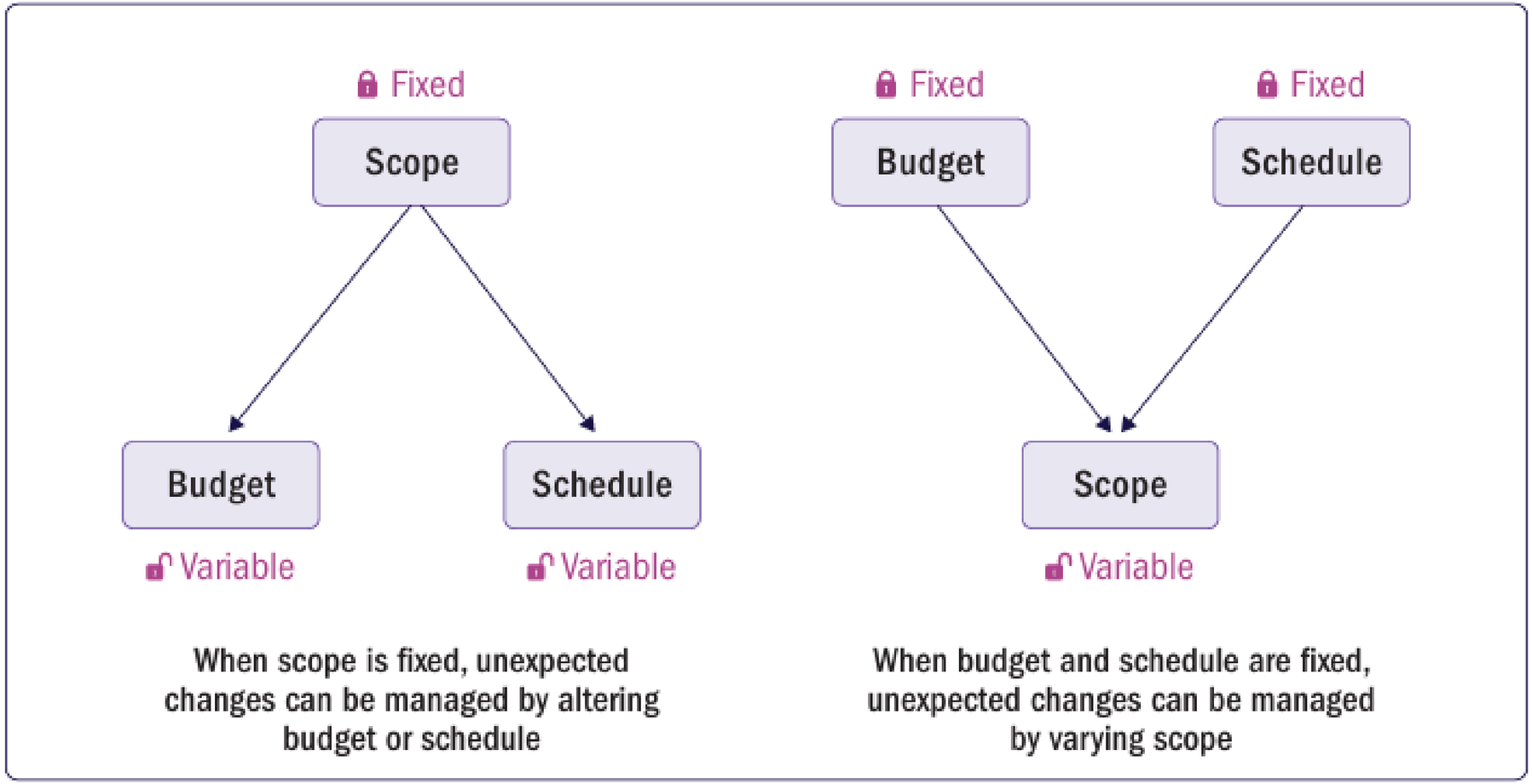
Sample Predictive Life Cycle with incremental delivery



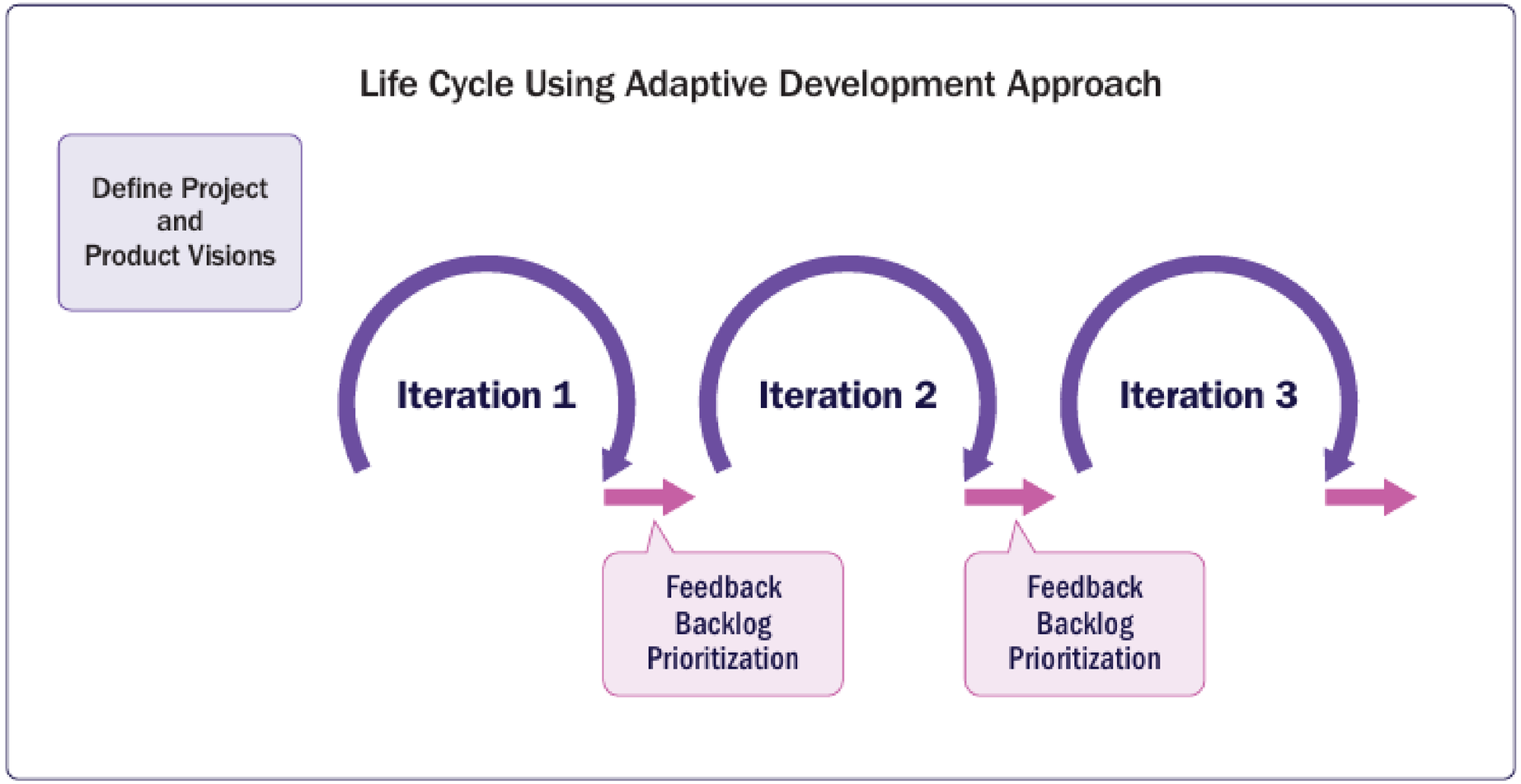
Predictive Approaches



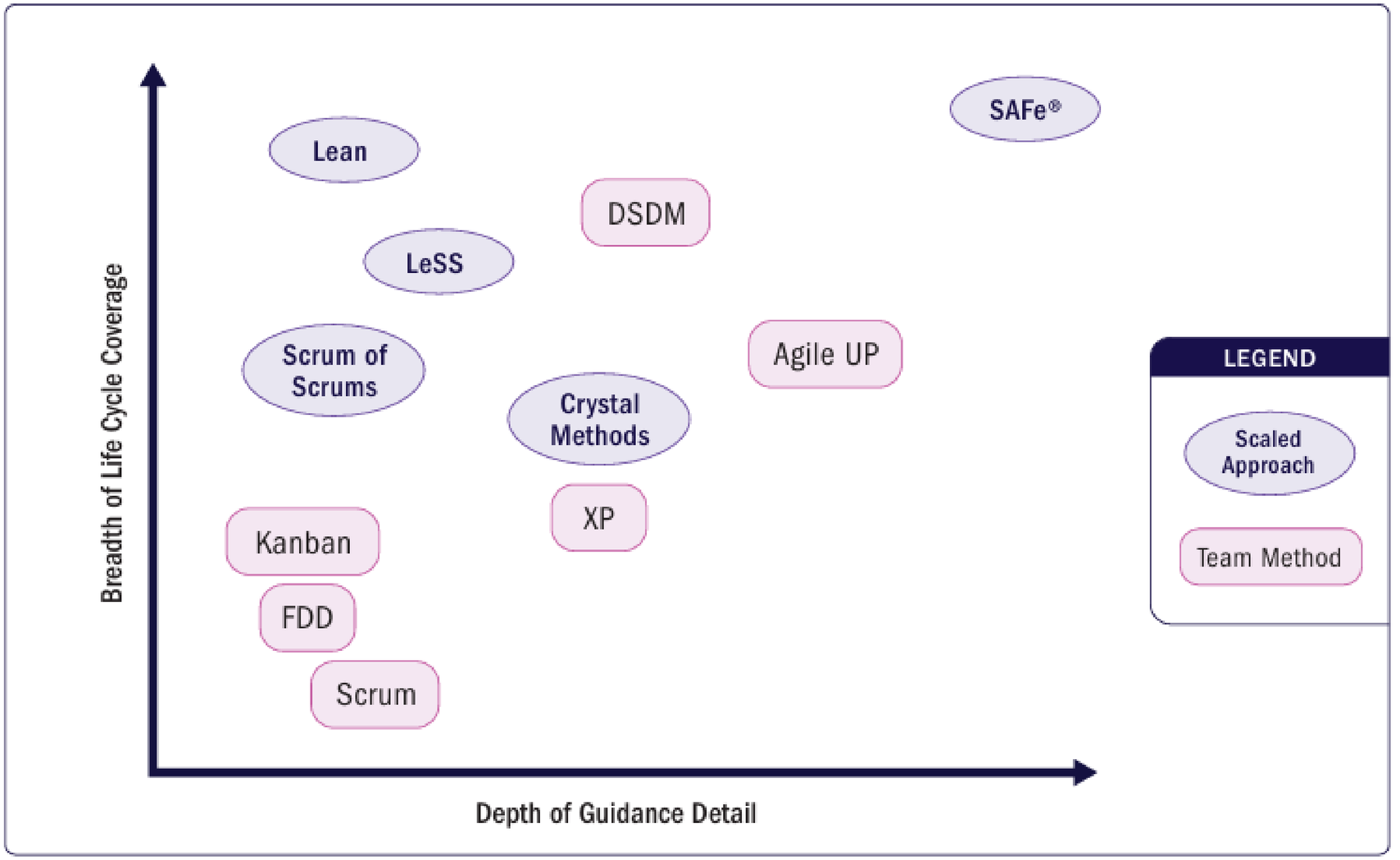
Constraints options for Adaptive Approach



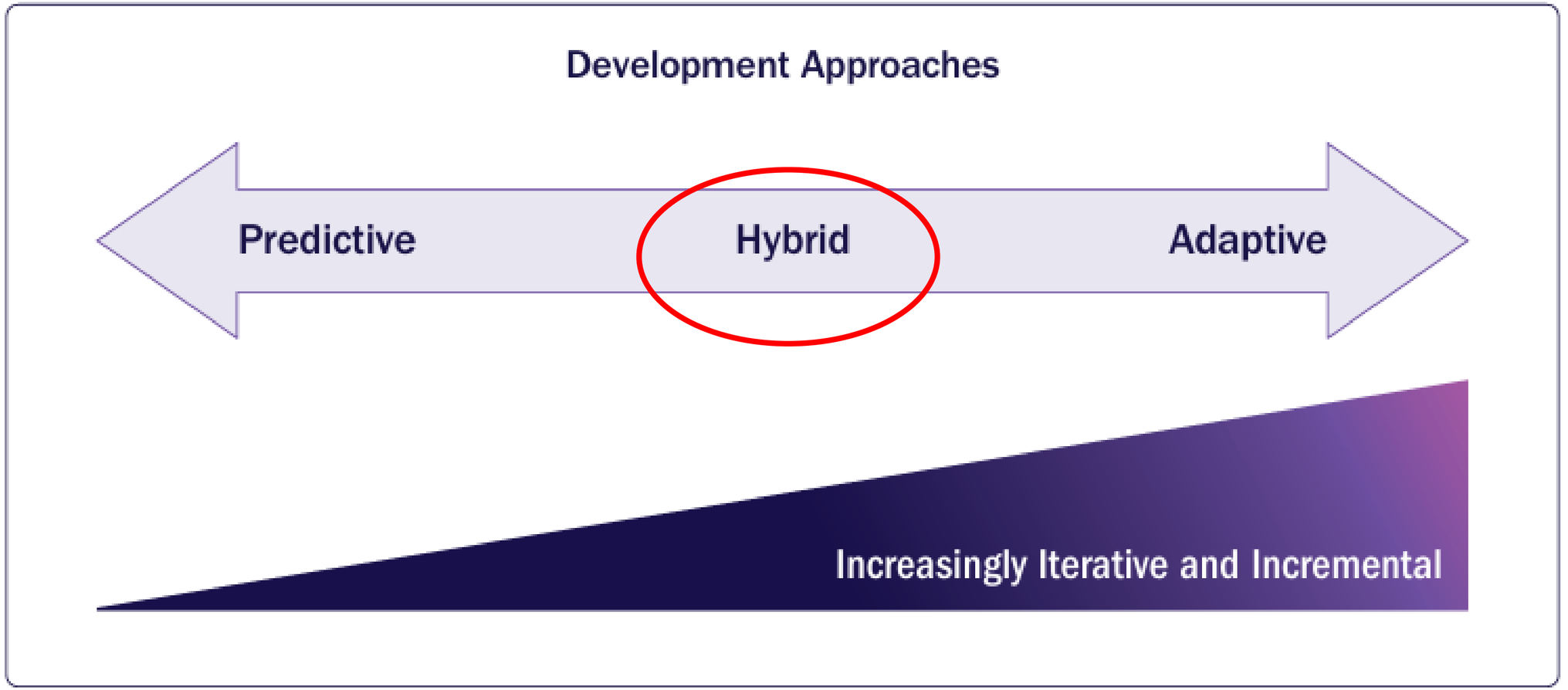
Life Cycle with an Adaptive Development Approach



Agile Approaches plotted by Breath and Depth



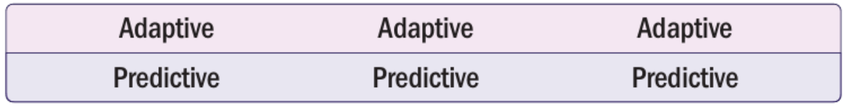
Hybrid Approaches



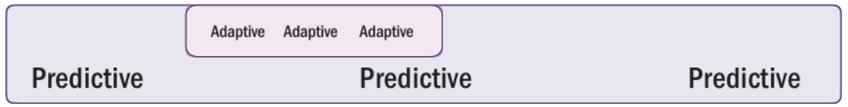
Four Common Patterns of Hybrid Project Management



Adoptive development followed by a Predictive Rollout.



A Hybrid of Adaptive and Predictive Approaches used simultaneously.



A largely Predictive Approach with an Adaptive Component



A largely Adaptive Approach with a Predictive Component

4. Considerations for selecting a Development Approach

PA – Predictive Approach
AA – Adaptive Approach
HA – Hybrid Approach

Deliverables	Project	Organization
Degree of innovation	Stakeholders	Organizational Structure
Requirements Certainty	Schedule Constraints	Culture
Degree of Scope Scalability	Financing Uncertainty	Organizational Capability
Ease of Change	Project Size and Complexity	Project Team Size and Location
Delivery Options	Team Experience and Skills	
Risk	Interdependencies	
Safety Requirements		
Feedback		
Regulations		

Tailoring the Life Cycle

Predictive Life Cycle (Waterfall):

Characteristics: Scope, time, and cost are determined early in the project life cycle. Changes are tightly controlled.

When to Use: Requirements are well-understood, stable, and unlikely to change significantly. Output is well-defined.

Example: Large-scale infrastructure projects (e.g., bridge construction), where design changes are extremely costly.

Adaptive Life Cycle (Agile/Iterative/Incremental):

Characteristics: Scope is broadly defined early on, but detailed planning occurs iteratively as the project progresses. Embraces change.

When to Use: Requirements are uncertain, evolving, or complex. High degree of stakeholder involvement.

Example: Software development, product innovation, R&D projects.

Hybrid Life Cycle:

Characteristics: A combination of predictive and adaptive approaches. Critical requirements are fixed, while others are developed adaptively.

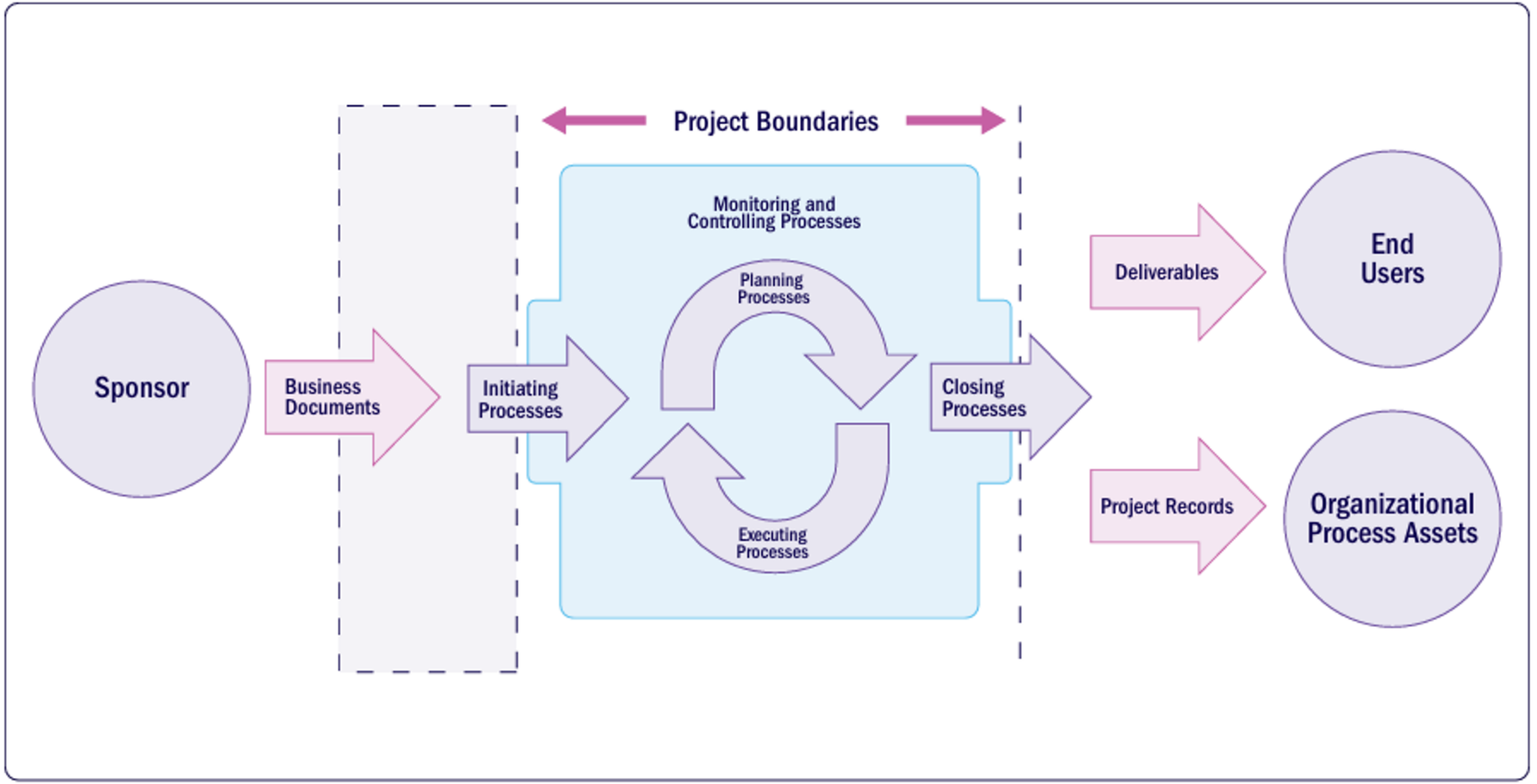
When to Use: Projects with some well-defined components and some evolving components.

Example: Developing a new hardware product (predictive for hardware manufacturing) with custom software (adaptive for software features).

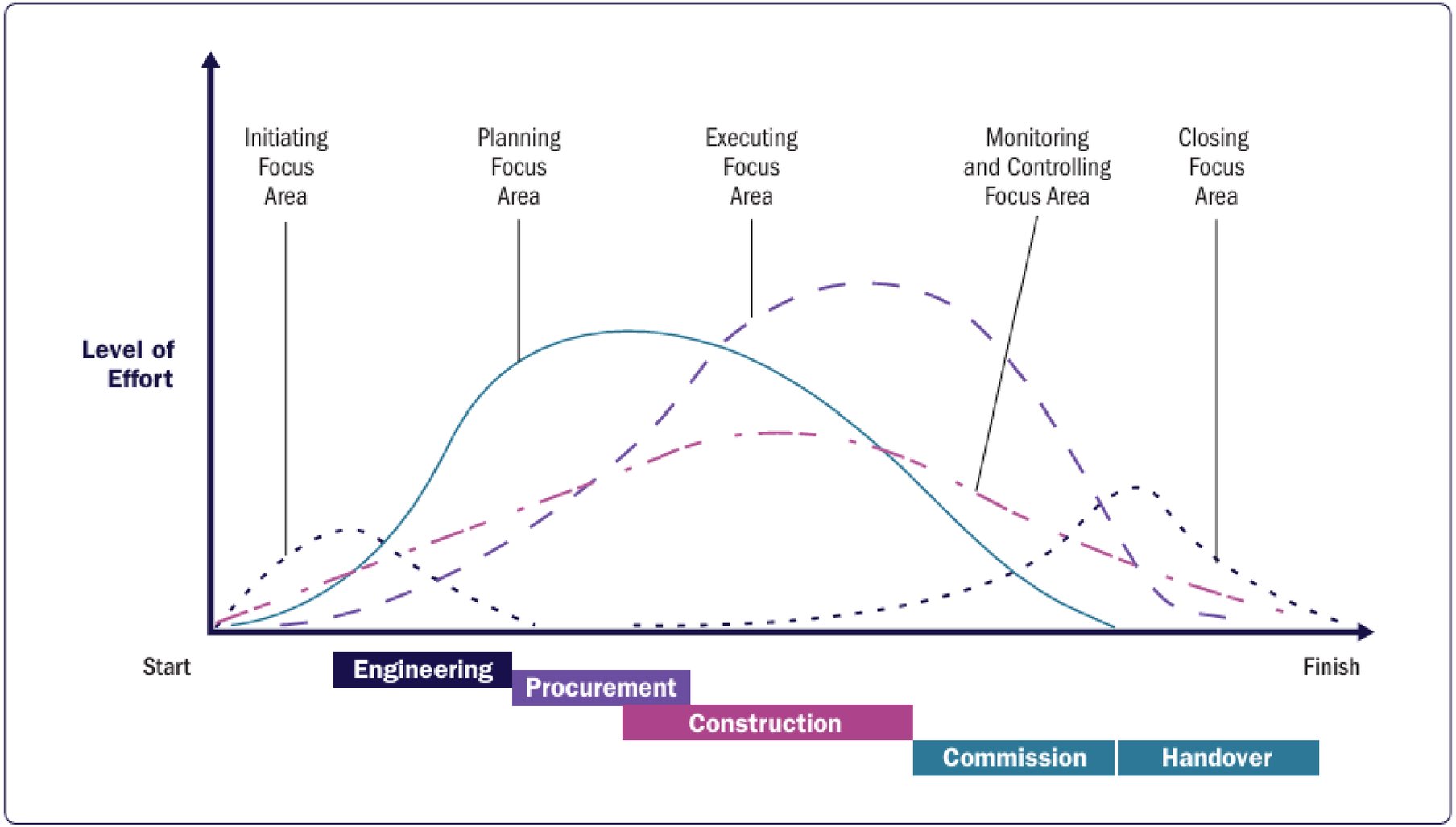
5. Delivery Cadence

Delivery Cadence	Description
Single Delivery	All outcomes are produced at the end of the project.
Multiple Delivery	Multiple components or elaborations are delivered at different times throughout the project (Delivery schedule not fixed).
Periodic Delivery	Multiple components or elaborations are delivered periodically on regular and fixed schedule. Common in Adaptive Approaches.
Continuous Delivery	Incrementally delivering value to production on an ongoing basis. Allows organizations to iterate quickly and provide regular updates without introducing unnecessary deployment overheads.

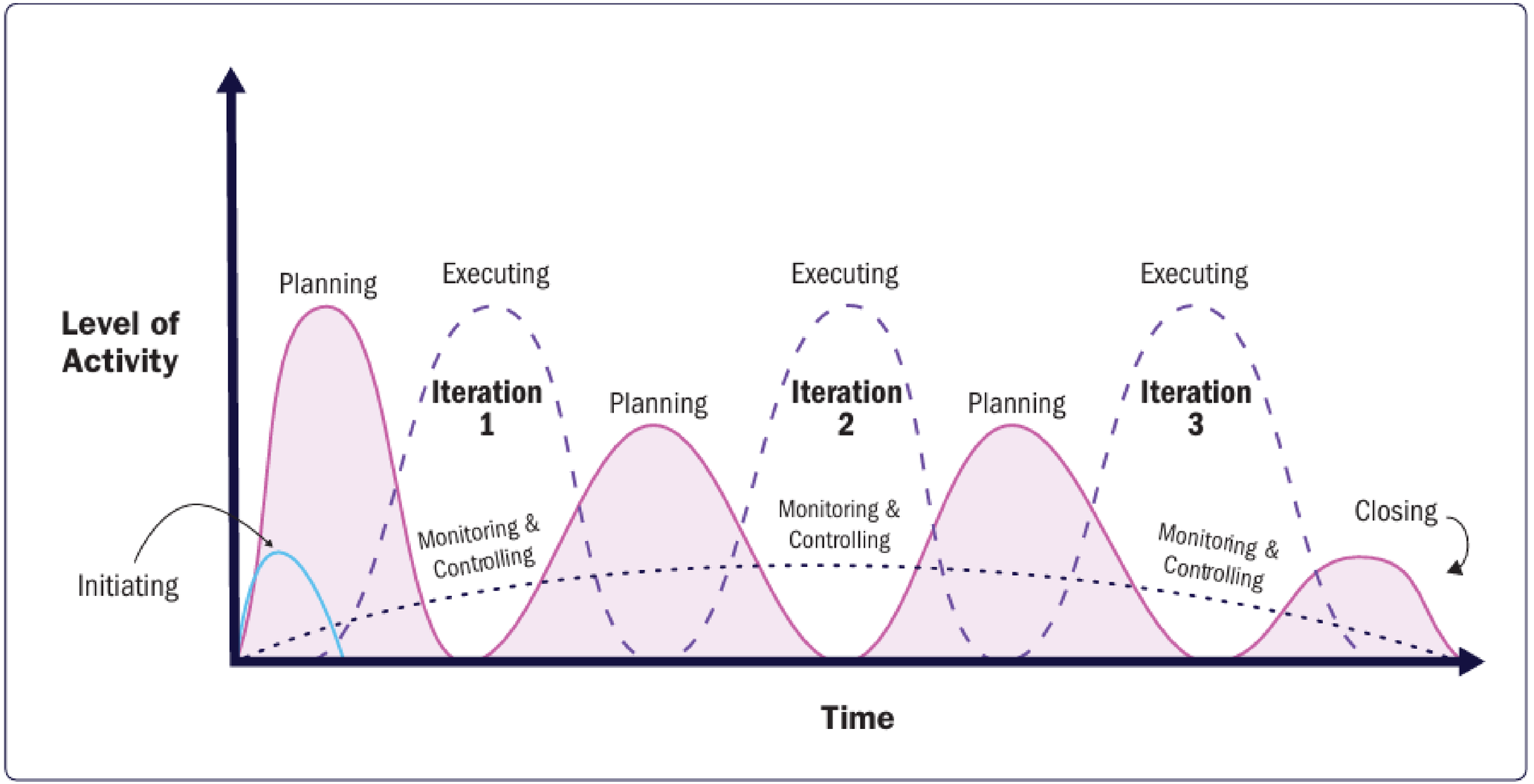
6. Project Management Focus Areas



Example of Focus Area interactions within a Project or Phase using a Predictive Approach.



Example of Focus Area interactions within a Project or Phase using an Adaptive Approach.



6.1. Project Initiation - Laying the Foundation

Definition: The first phase where a project or phase of an existing project is formally authorized and its initial scope and stakeholders are defined.

Objectives:

- Validate the project's feasibility and alignment with strategic goals.
- Obtain formal authorization to proceed.
- Identify key stakeholders and their high-level expectations.
- Assign the Project Manager.

Key Activities:

- Conducting a needs assessment and feasibility study.
- Defining the project vision and high-level objectives.
- Identifying potential solutions and their business value.
- Developing the Project Charter.
- Identifying initial risks and assumptions.

Key Artifacts:

- Project Charter [PMI Knowledge Base]
- Stakeholder Register [PMI Knowledge Base]
- Business Case [PMI Knowledge Base]

Governance Gates: Project Kick-off Approval, Business Case Approval, Project Charter Approval.

Common Risks: Unclear objectives, insufficient sponsorship, scope creep (even at a high level), failure to identify critical stakeholders.

6.2. Project Planning – Charting the Course

Definition: The phase where detailed objectives, scope, schedule, budget, resources, and risk management strategies are developed.

Objectives:

To develop the Project Management Plan and all its subsidiary plans.
Establish baselines for scope, schedule, and cost.
Plan for quality, resources, communications, and risk responses.

Key Activities:

Creating the Work Breakdown Structure (WBS).
Developing the project schedule and cost estimates.
Identifying and planning for resources (human, material, equipment).
Developing a risk management plan, including identification, analysis, and response strategies.
Establishing a communication plan for stakeholders.
Planning for procurement if external resources are needed.

Key Artifacts:

Project Management Plan (PMP) [PMI Knowledge Base]
Work Breakdown Structure (WBS) [PMI Knowledge Base]
Schedule Baseline, Cost Baseline, Scope Baseline [PMI Knowledge Base]
Risk Register [PMI Knowledge Base]
Procurement Management Plan [PMI Knowledge Base]

Governance Gates: Project Management Plan Approval, Baseline Approvals, Detailed Design Review.

Common Risks: Inadequate planning, unrealistic estimates, scope creep, overlooked risks, lack of stakeholder buy-in to the plan.

6.3. Project Execution – Doing the Work

Definition: The phase where the work defined in the project management plan is carried out to achieve project objectives.

Objectives:

- Perform the planned work and produce deliverables.
- Manage project team members and their performance.
- Acquire, develop, and manage project resources.
- Implement planned risk responses.
- Manage stakeholder engagement and communications.

Key Activities:

- Directing and managing project work.
- Managing project knowledge (lessons learned, best practices).
- Performing quality assurance activities.
- Executing procurement processes and managing contracts.
- Developing the project team and managing human resources.
- Communicating with stakeholders as per the plan.

Key Artifacts:

- Deliverables (completed work packages)
- Work Performance Data [PMI Knowledge Base]
- Change Requests [PMI Knowledge Base]
- Issue Log [PMI Knowledge Base]
- Project Team Assignments

Governance Gates: Interim Progress Reviews, Quality Gate Reviews, Contract Performance Reviews.

Common Risks: Resource unavailability, quality issues, scope creep, unmanaged risks turning into issues, communication breakdowns.

6.4. Project Monitoring and Controlling – Staying on Track

Definition: The phase where project performance is tracked, reviewed, and regulated; identifying any variances from the project management plan; and initiating corrective actions as needed. This phase runs concurrently with Execution.

Objectives:

- Track, review, and regulate project progress against the plan.
- Identify deviations and implement corrective or preventive actions.
- Manage and approve changes to baselines.
- Control project scope, schedule, cost, and quality.
- Monitor risks and implement risk responses.

Key Activities:

- Monitoring and controlling project work (Earned Value Management).
- Performing integrated change control.
- Controlling scope, schedule, and costs.
- Controlling quality processes and outcomes.
- Monitoring stakeholder engagement.
- Conducting risk audits and evaluating risk response effectiveness.

Key Artifacts:

- Work Performance Reports [PMI Knowledge Base]
- Forecasts (schedule, cost) [PMI Knowledge Base]
- Approved Change Requests [PMI Knowledge Base]
- Variance Analysis Reports
- Project Dashboards

Governance Gates: Project Status Reviews, Change Control Board (CCB) Meetings, Performance Reporting.

Common Risks: Failure to detect variances early, resistance to change, unapproved changes, ineffective corrective actions, scope creep.

6.5. Project Closing – Formalizing Completion

Definition: The final phase where all activities across all process groups are formally completed, and the project or phase is closed.

Objectives:

- Obtain formal acceptance of the project deliverables.
- Close all project contracts and financial accounts.
- Release project resources.
- Perform a final lessons learned analysis.
- Archive project documents and information.
- Celebrate successes and recognize contributions.

Key Activities:

- Final verification of scope completion.
- Obtaining final product, service, or result acceptance.
- Closing all procurements.
- Conducting close-out meetings.
- Performing lessons learned activities.
- Archiving project documents.
- Releasing team members.

Key Artifacts:

- Final Product, Service, or Result Transition [PMI Knowledge Base]
- Final Project Report
- Lessons Learned Register [PMI Knowledge Base]
- Archived Project Documents
- Formal Project Closure Notification

Governance Gates: Final Project Review, Formal Acceptance Sign-off, Contract Closure Approval.

Common Risks: Incomplete handover, failure to capture lessons learned, contractual disputes, premature resource release, unaddressed loose ends.

Benefits Follow-Through – Realizing Value

Definition: The post-project activities focused on measuring and ensuring that the expected business benefits and value articulated in the business case are actually realized.

Objectives:

- Monitor the actual realization of expected benefits over time.
- Implement strategies to sustain the achieved benefits.
- Evaluate the project's overall success in contributing to strategic goals.

Key Activities:

- Developing a Benefits Management Plan (often before project starts).
- Monitoring key performance indicators (KPIs) post-project.
- Collecting and analyzing benefits realization data.
- Adjusting operations to maximize benefits.
- Reporting on benefits realization to stakeholders.

Key Artifacts:

- Benefits Management Plan [PMI Knowledge Base]
- Benefits Realization Report
- Post-Implementation Review (PIR)

Governance Gates: Post-Implementation Review, Benefits Realization Review Meetings.

Common Risks: Benefits not clearly defined, lack of ownership post-project, inadequate measurement, organizational resistance to change, external factors impacting benefits.

Summary

1. Project management is a universal discipline, essential for turning ideas into reality across all sectors.

2. Effective project management is built on foundational concepts, structured processes, and adaptable approaches.

3. Success hinges on balancing constraints, managing risks, engaging stakeholders, and fostering strong leadership and teamwork.

4. Continuous learning and adaptation are key to navigating the dynamic world of projects.

5. Everyone is encouraged to apply these principles and continue your journey in project management competency.

References

1. A Guide to the Project Management Body of Knowledge (PMBOK® Guide). Newtown Square, PA.

2. PMI Standards+. Available at: standardsplus.pmi.org

3. Organizational PMO/Governance Guidance Documents.

Thank you.