November 2025

Grundlegende Konzepte im Projektmanagement (PMBOK® Guide – Eighth Edition)

Study Group Session Event Input

Project Management Institute. Germany

Your host for today

Grundlegende Konzepte im Projektmanagement (PMBOK® Guide – Eighth Edition)

Aaron Haoua ist Project Manager bei adesso. Dabei ist er ganzheitlich und interdisziplinär unterwegs! Dazu gehören IT-gestütztes Projektmanagement sowie das Vermitteln von Wissen im Rahmen von Workshops und Schulungen.

Im Projektmanagement gilt, komplexe Inhalte aufzubereiten und zielgruppengerecht zu moderieren. Dabei greift Aaron auf verschiedene Tools sowie projektorientierte Arbeitsweisen (agil / hybrid / waterfall) zurück.

Tailoring is key –
Do the right things instead of doing things right!

Be brave!!

Event Agenda

Grundlegende Konzepte im Projektmanagement (PMBOK® Guide – Eighth Edition)

Inhalte

(1) Definition: Projekt & Wertschöpfung

(2) Rolle des Projektmanagers & Das Team

(3) Constraints: Das "Magische Dreieck" neu gedacht

(4) Projektlebenszyklus & Focus Areas (ehem. Prozessgruppen)

(5) Wichtige Werkzeuge: WBS, CPM, EVM

(6) Stakeholder Engagement

(7) Zusammenfassung & Abschluss

Was ist ein Projekt & Wertschöpfung?

Grundlegende Konzepte im Projektmanagement (PMBOK® Guide – Eighth Edition)

Definition Projekt:

Ein zeitlich begrenztes Vorhaben in einem einzigartigen Kontext, das unternommen wird, um Wert zu schaffen.

Wert (Value):

Der Netto-Nutzen (finanziell oder nicht-finanziell), der durch das Projekt erzielt wird. Der Fokus liegt auf Outcomes (Wirkungen), nicht nur auf Outputs (Ergebnissen).

System der Wertschöpfung:

Projekte existieren nicht isoliert, sondern in einem System aus Portfolios, Programmen, Produkten und dem operativen Betrieb.

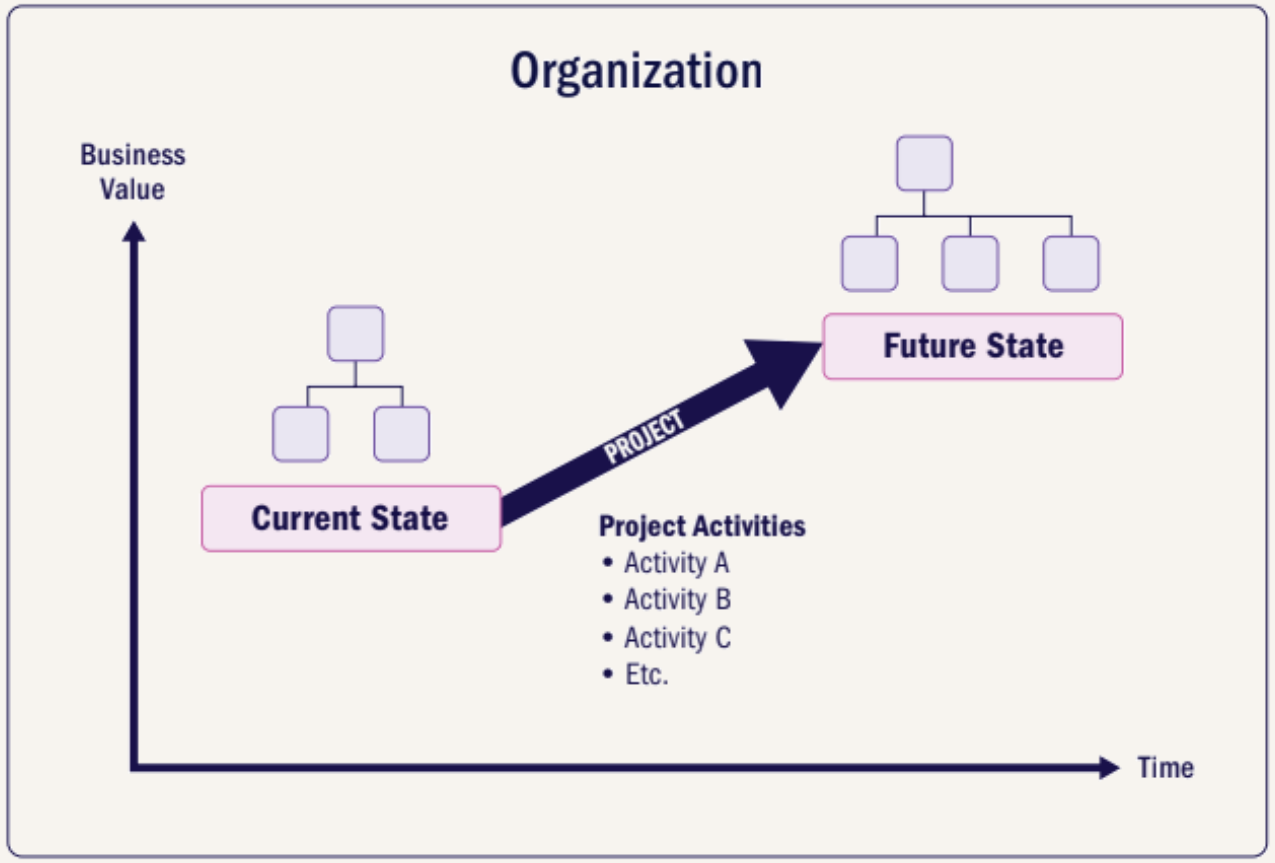


Figure 1-1. Impact of Projects on Organizational States

Der Projektmanager und das Team

Grundlegende Konzepte im Projektmanagement (PMBOK® Guide – Eighth Edition)

Projektmanager: Die Person, die von der durchführenden Organisation zugewiesen wird, um das Team zu leiten, das für das Erreichen der Projektziele verantwortlich ist.

Projektmanagement-Team: Die Mitglieder des Projektteams, die direkt an Projektmanagement-Aktivitäten beteiligt sind.

Kompetenz-Dreieck (Talent Triangle):

- **Ways of Working:** Beherrschung verschiedener Methoden (Predictive, Agile, Design Thinking etc.).
- **Power Skills:** Führung, Kommunikation, Empathie (Interpersonal Skills).
- **Business Acumen:** Verständnis für Strategie und Geschäftsziele.

Figure 2-7. Project Management Team Competencies

Das Magische Dreieck & Entwicklungsansätze

Grundlegende Konzepte im Projektmanagement (PMBOK® Guide – Eighth Edition)

Das "Magische Dreieck" (Constraints):

Im PMBOK 8th Ed. oft im Kontext der "Inverted Triangle" bei adaptiven Ansätzen diskutiert.

Predictive: Scope ist fix; Zeit und Kosten werden geschätzt.

Adaptive: Zeit und Kosten sind oft fix (Timebox/Budget); Scope ist variabel (Backlog).

Entwicklungsansätze (Development Approaches):

Predictive (Waterfall): Plan-getrieben, gut für stabile Anforderungen.

Adaptive (Agile): Iterativ & Inkrementell, gut bei hoher Unsicherheit.

Hybrid: Mischung aus beiden.

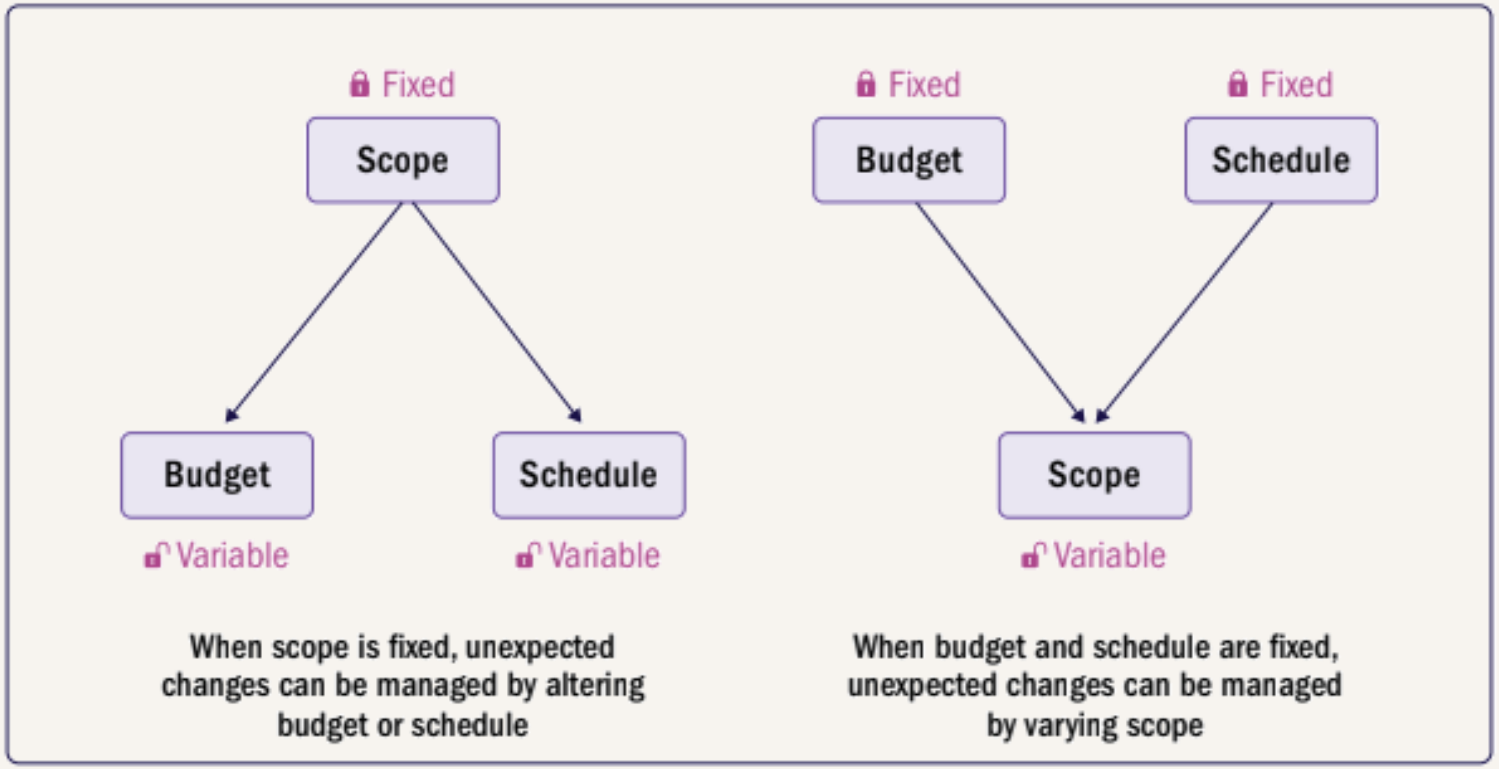


Figure 4-3. Constraint Options for Adaptive Approaches

Lebenszyklus & Focus Areas (Prozessgruppen)

Grundlegende Konzepte im Projektmanagement (PMBOK® Guide – Eighth Edition)

Wichtig für das Examen: Die klassischen "Prozessgruppen" wurden im PMBOK 8th Ed. als **Focus Areas** wieder eingeführt, um zu zeigen, dass sie keine starren Phasen sind, sondern Gruppierungen von Aktivitäten.

Die 5 Focus Areas:

- **Initiating:** Stakeholder-Ausrichtung, Projekt-Charter.
- **Planning:** Festlegung des Scopes, der Ziele und des Vorgehens.
- **Executing:** Durchführung der Arbeit gemäß Plan.
- **Monitoring and Controlling:** Überwachung des Fortschritts und Steuerung von Änderungen.
- **Closing:** Formaler Abschluss und Übergabe.

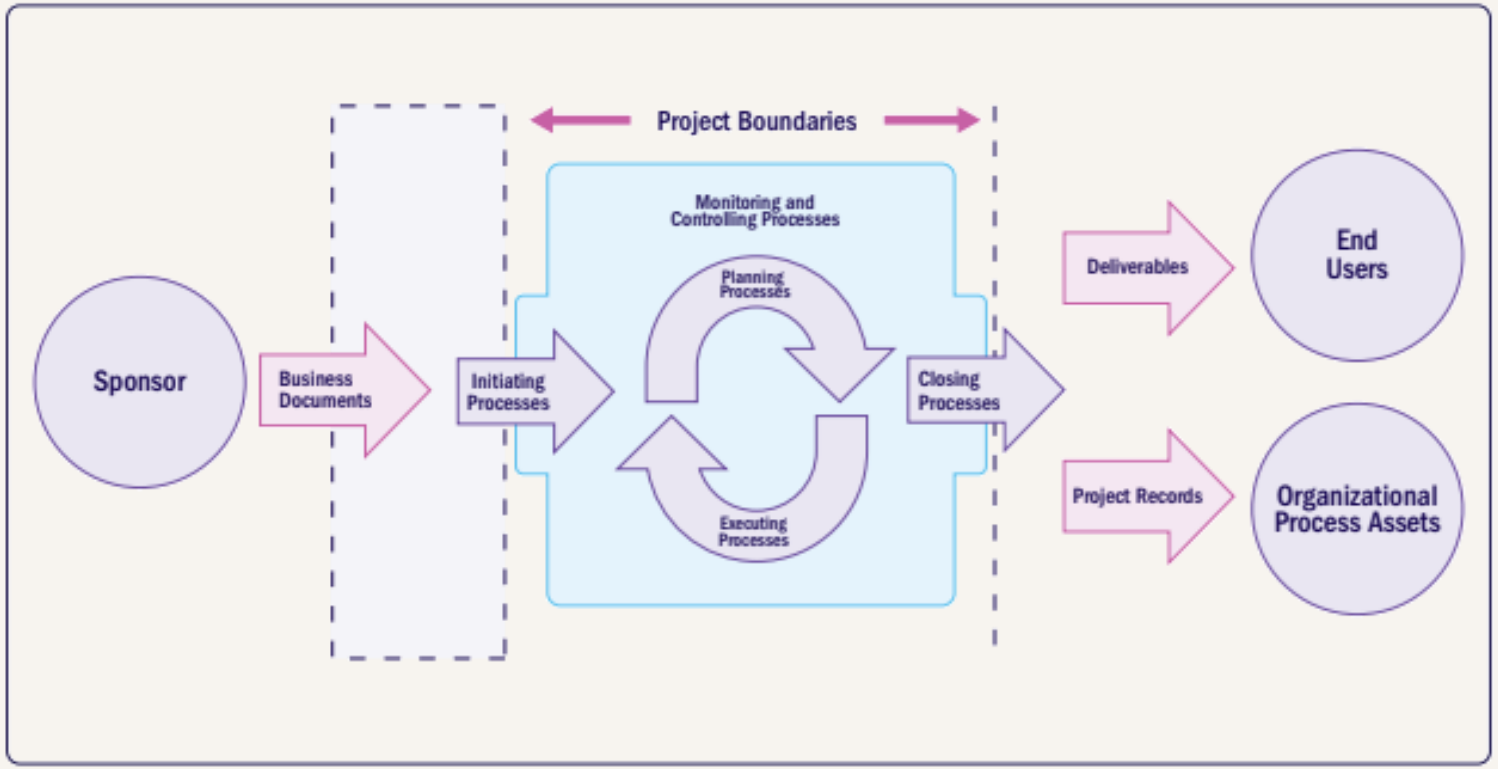


Figure 4-12. Project Boundaries

Werkzeuge I – Struktur & Zeitplan

Grundlegende Konzepte im Projektmanagement (PMBOK® Guide – Eighth Edition)

Work Breakdown Structure (WBS) / Projektstrukturplan (PSP):

- Hierarchische Zerlegung des gesamten Projektumfangs in Arbeitspakete.
- Dient als Scope Baseline (zusammen mit Scope Statement und WBS Dictionary).
- *Beispiel:* Figure 5-6.

Critical Path Method (CPM):

- Identifiziert die längste Kette von Aktivitäten, die die Mindestdauer des Projekts bestimmt (Zero Float).
- Wichtig: Forward Pass (Early Start/Finish) und Backward Pass (Late Start/Finish).
- *Beispiel:* Figure 5-4.

Gantt Chart (Balkendiagramm):

- Visualisierung des Zeitplans: Aktivitäten auf der vertikalen Achse, Zeit auf der horizontalen Achse.

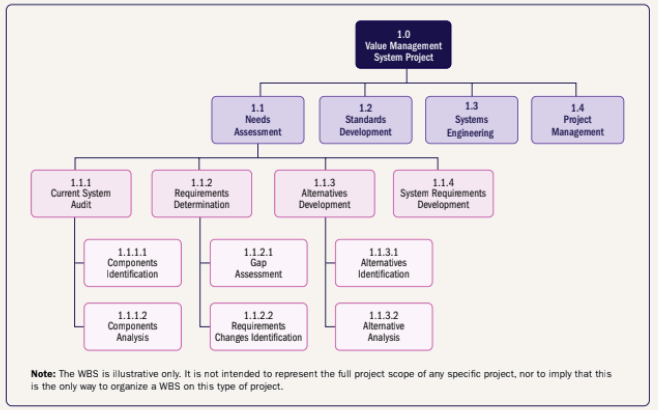


Figure 5-6. Sample WBS Decomposed Down Through Work Packages

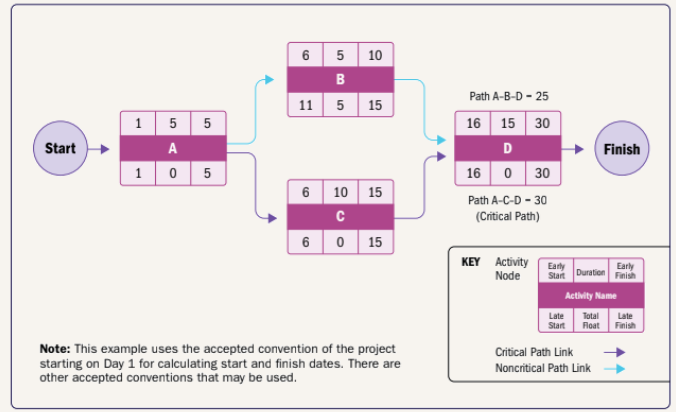
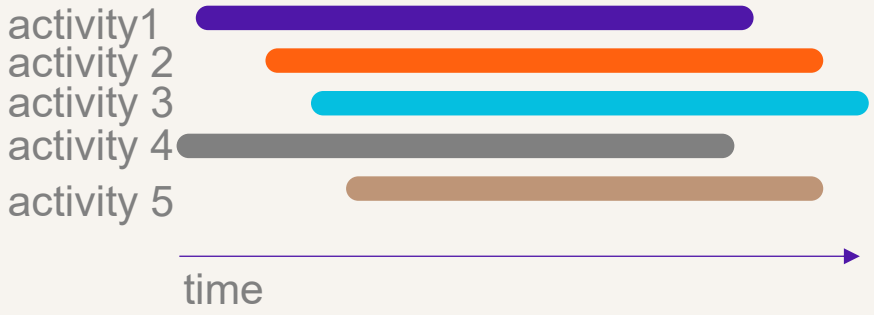


Figure 5-4. Example of Critical Path Method



Werkzeuge II – Earned Value Management (EVM)

Grundlegende Konzepte im Projektmanagement (PMBOK® Guide – Eighth Edition)

EVM: Integriert Scope, Zeit und Kosten zur Leistungsmessung.

Die wichtigsten Kennzahlen (Tabelle 5-1):

- **PV (Planned Value):** Was wollten wir bis heute schaffen? (Geplanter Wert).
- **EV (Earned Value):** Was haben wir tatsächlich geschafft? (Fertigstellungswert).
- **AC (Actual Cost):** Was hat es tatsächlich gekostet? (Ist-Kosten).

Abweichungsanalyse:

- **SV (Schedule Variance):** EV - PV (Negativ = Hinter Zeitplan).
- **CV (Cost Variance):** EV - AC (Negativ = Über Budget).

Indizes (Wichtig für PMP Fragen!):

- **SPI (Schedule Performance Index):** EV / PV (< 1.0 = Schlecht).
- **CPI (Cost Performance Index):** EV / AC (< 1.0 = Schlecht/Teurer).

Table 5-1. Earned Value Calculations Summary

Earned Value Analysis					
Abbreviation	**Name**	**Lexicon Definition**	**How It Is Used**	**Equation**	**Interpretation of Result**
PV	Planned value	The authorized budget assigned to scheduled work	It is the value of the work planned to be completed to a point in time, usually the data date or project completion.		
EV	Earned value	The measure of work performed expressed in terms of the budget authorized for that work	It is the planned value of all the work completed (earned) to a point in time, usually the data date, without reference to actual costs.	EV = Sum of the planned value of completed work	
AC	Actual cost	The realized cost incurred for the work performed on an activity during a specific time period	It is the actual cost of all the work completed to a point in time, usually the data date.		
BAC	Budget at completion	The sum of all budgets established for the work to be performed	It is the value of total planned work: the project cost baseline.		
CV	Cost variance	The amount of budget deficit or surplus at a given point in time, expressed as the difference between the earned value and the actual cost	It is the difference between the value of work completed to a point in time, usually the data date, and the actual cost to the same point in time.	CV = EV – AC	Positive = Under planned cost Neutral = On planned cost Negative = Over planned cost

(continued)

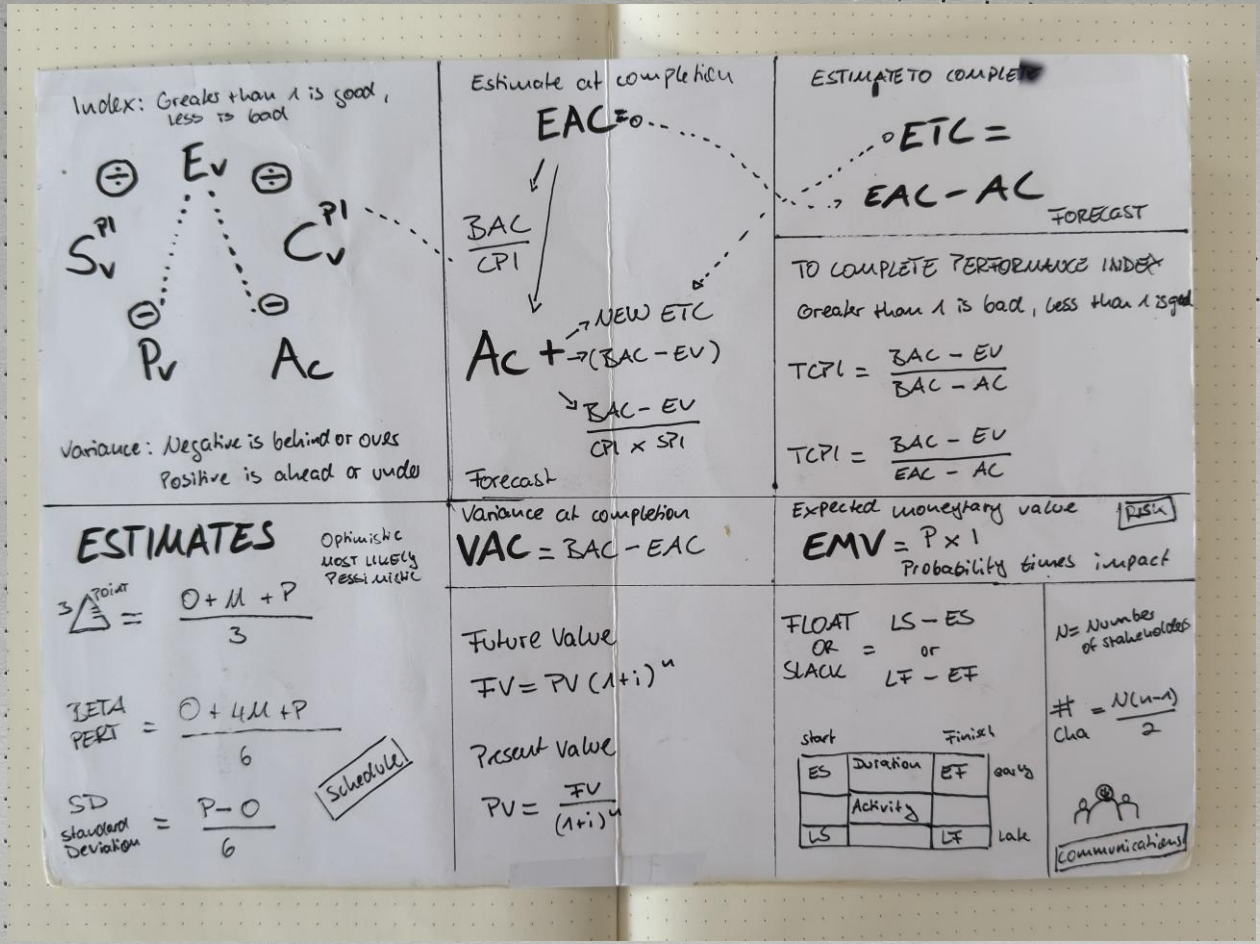
Table 5-1. *(Continued)*

Earned Value Analysis					
Abbreviation	**Name**	**Lexicon Definition**	**How It Is Used**	**Equation**	**Interpretation of Result**
SV	Schedule variance	A measure of schedule performance expressed as the difference between the earned value and the planned value	It is the difference between the work completed to a point in time, usually the data date, and the work planned to be completed to the same point in time.	SV = EV – PV	Positive = Ahead of schedule Neutral = On schedule Negative = Behind schedule
VAC	Variance at completion	A projection of the amount of budget deficit or surplus, expressed as the difference between the budget at completion and the estimate at completion	It is the estimated difference in cost at the completion of the project.	VAC = BAC – EAC	Positive = Under planned cost Neutral = On planned cost Negative = Over planned cost
CPI	Cost performance index	A measure of the cost efficiency of budgeted resources expressed as the ratio of earned value to actual cost	A CPI of 1.0 means the project is exactly on budget; that the work actually done so far is exactly the same as the cost so far. Other values show the percentage of how much costs are over or under the budgeted amount for work accomplished.	CPI = EV / AC	Greater than 1.0 = Under planned cost Exactly 1.0 = On planned cost Less than 1.0 = Over planned cost

Create your own Cheat-Sheet

Grundlegende Konzepte im Projektmanagement (PMBOK® Guide – Eighth Edition)

My Cheat Sheet during the PMP Prep Phase in 2021



Stakeholder Management

Grundlegende Konzepte im Projektmanagement (PMBOK® Guide – Eighth Edition)

Bedeutung: Stakeholder bestimmen den Erfolg des Projekts und sollten "empowered" werden.

Prozesse im Überblick: Identify, Plan Engagement, Manage Engagement, Monitor Engagement.

Werkzeug: Stakeholder Engagement Assessment Matrix:

Vergleich von aktuellem (C - Current) und gewünschtem (D - Desired) Engagement-Level.

Kategorien: Unaware, Resistant, Neutral, Supportive, Leading.

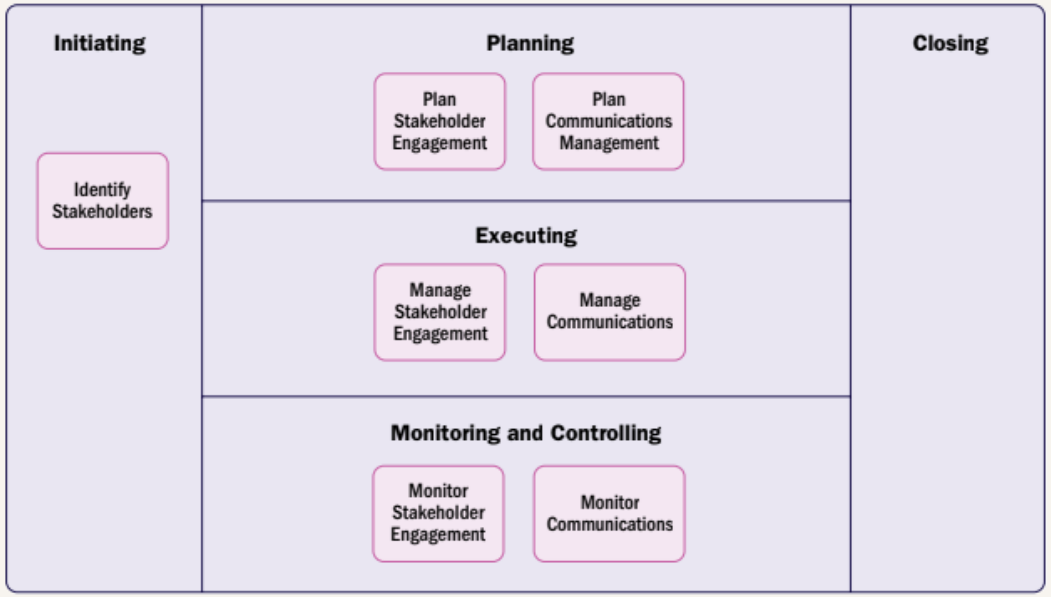


Figure 2-32. Stakeholders Performance Domain Processes Overview

Stakeholder	Unaware	Resistant	Neutral	Supportive	Leading
Stakeholder 1	C			D	
Stakeholder 2			C	D	
Stakeholder 3				D C	

Figure 5-23. Stakeholder Engagement Assessment Matrix

Zusammenfassung & Key Takeaways

Grundlegende Konzepte im Projektmanagement (PMBOK® Guide – Eighth Edition)

Value over Deliverables: Der Fokus liegt auf dem Wert (Outcome), nicht nur auf dem Produkt (Output).

Anpassung (Tailoring): Es gibt keinen "One Size Fits All"-Ansatz. Wähle den passenden Ansatz (Predictive/Adaptive/Hybrid) basierend auf dem Kontext.

Prinzipien-basiert: Die 8. Edition basiert auf Prinzipien (z.B. "Focus on Value", "Be an Accountable Leader"), die das Verhalten steuern.

Integration: Die Focus Areas (Prozessgruppen) laufen oft parallel und interagieren ständig miteinander.

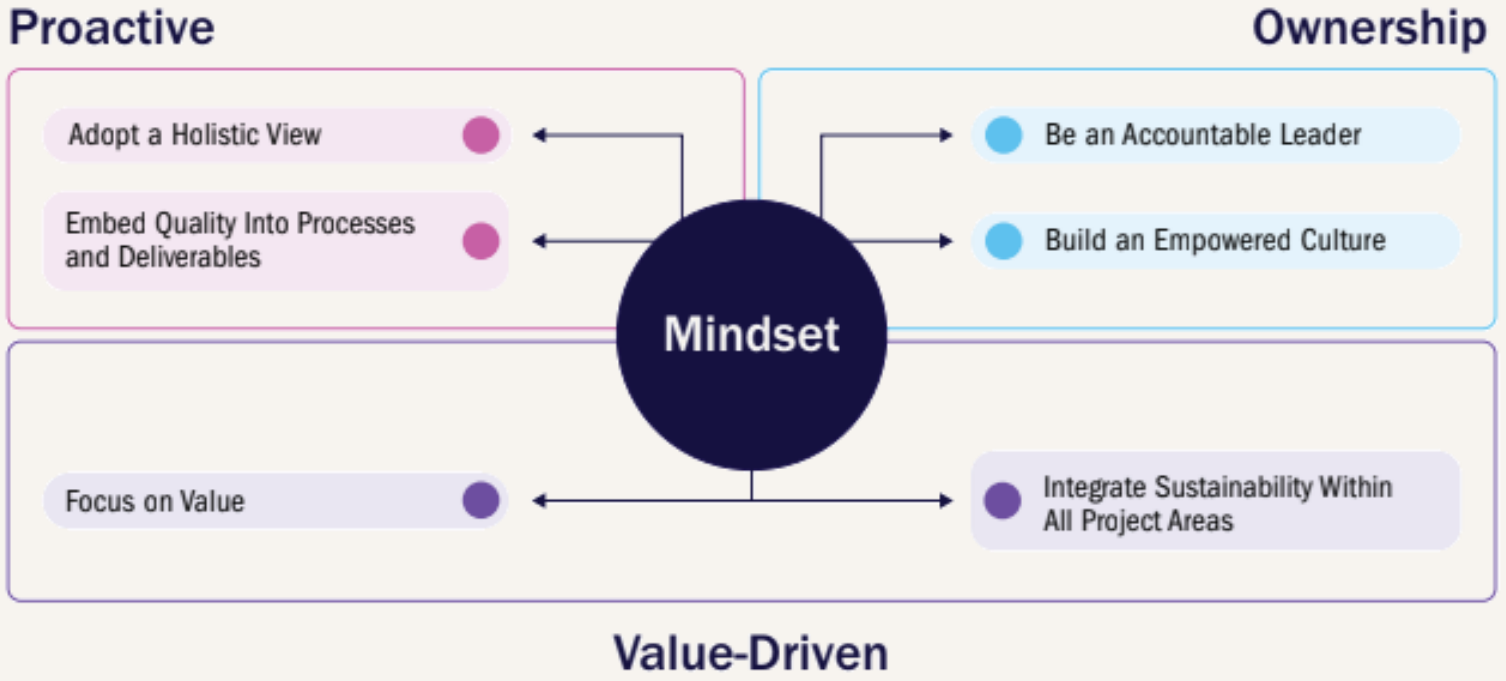


Figure 3-1. The Project Management Mindset

Q&A

Your host for today

Fundamental Concepts in Project Management (Refresher)

Aaron Haoua is a Project Manager at adesso. He takes a holistic and interdisciplinary approach! This includes IT-supported project management as well as knowledge transfer through workshops and training courses.

In project management, the goal is to process complex content and facilitate it in a way that is appropriate for the target group. To achieve this, Aaron utilizes various tools and project-oriented working methods (agile / hybrid / waterfall).

Tailoring is key –
Do the right things instead of doing things right!

Be brave!!

Event Agenda

Fundamental Concepts in Project Management (Refresher)

Content

(1) Definitions: Project & Value Creation

(2) The Project Manager and the Team

(3) The Magic Triangle & Development Approaches

(4) Life Cycle & Focus Areas (formerly Process Groups)

(5) Tools

(6) Stakeholder Engagement

(7) Summary & Closing

Definitions: Project & Value Creation

Fundamental Concepts in Project Management (Refresher)

What is a Project?

A temporary initiative in a unique context undertaken to create value.

Distinction from ongoing operations.

Focus on Value:

Shift from purely delivering "outputs" to creating "outcomes" and value.

Value is the net quantifiable benefit (financial or nonfinancial).

Value Delivery System:

Projects are part of a system comprising portfolios, programs, projects, products, and operations.

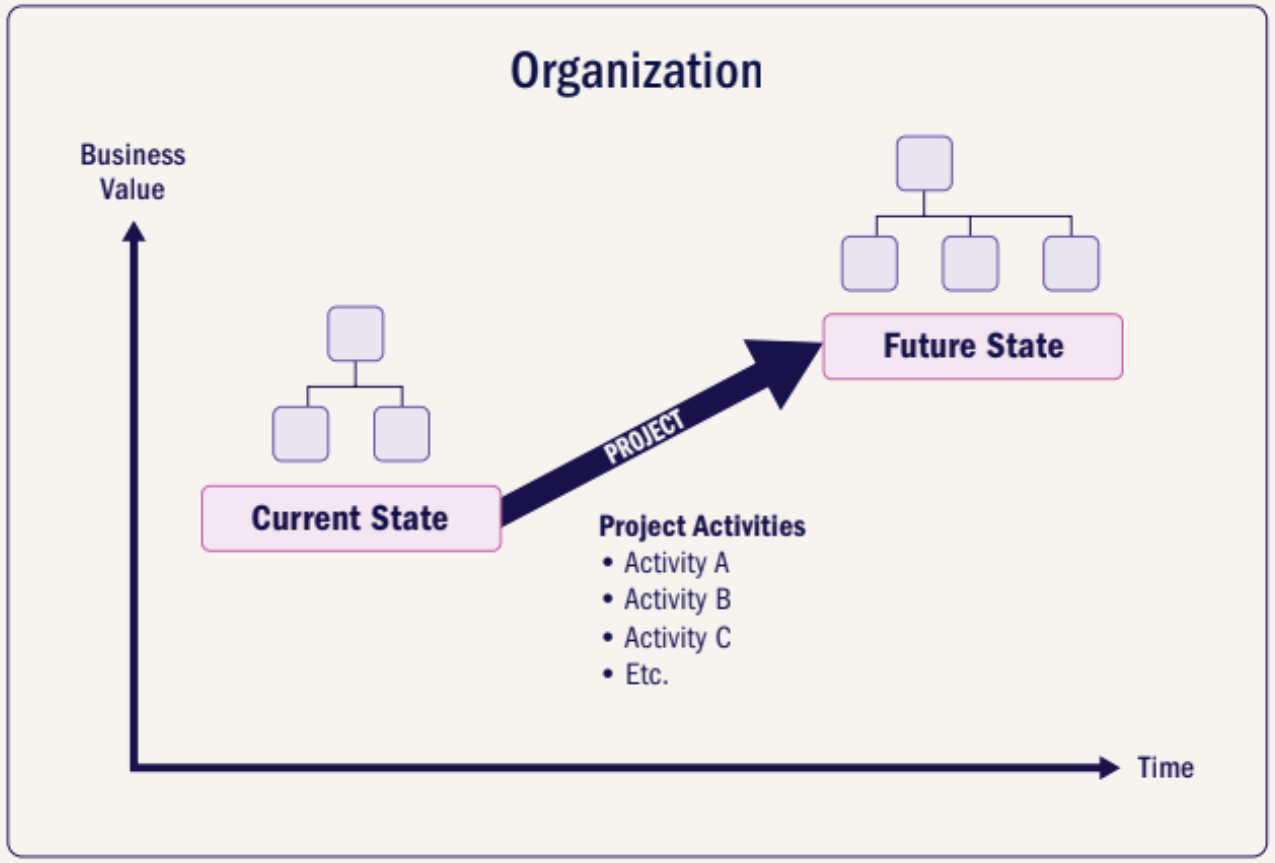


Figure 1-1. Impact of Projects on Organizational States

The Project Manager and the Team

Fundamental Concepts in Project Management (Refresher)

Role of the Project Manager:

The person assigned by the performing organization to lead the team responsible for achieving the project objectives.

The Project Management Team:

Members of the project team who are directly involved in project management activities.

PMI Talent Triangle (Competencies):

Ways of Working: Mastery of various methods (Predictive, Adaptive/Agile, Design Thinking, etc.).

Power Skills: Interpersonal skills, leadership, communication.

Business Acumen: Understanding of strategy and organizational goals.

Figure 2-7. Project Management Team Competencies

The Magic Triangle & Development Approaches

Fundamental Concepts in Project Management (Refresher)

Constraints:

Traditional: Time, Cost, Scope.

Inverted Triangle (Adaptive Approaches):

Predictive: Scope is fixed; time and cost are variable (estimated).

Adaptive: Time and cost are fixed (Timebox/Budget); scope is variable (Backlog).

Development Approaches:

Predictive (Waterfall): Scope, time, and cost are determined early.

Adaptive (Agile): Requirements are subject to high uncertainty; iterative approach.

Hybrid: Combination of both approaches.

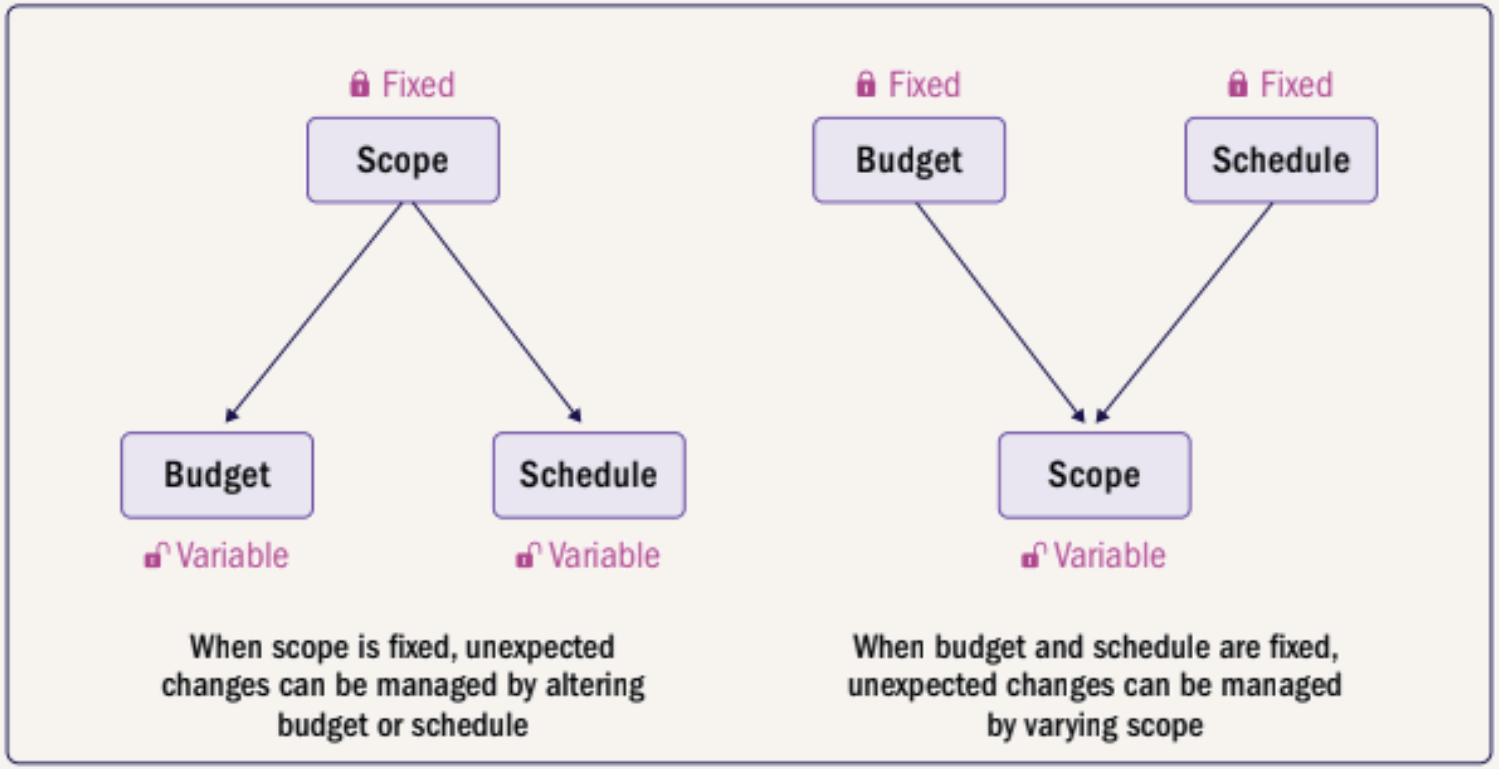


Figure 4-3. Constraint Options for Adaptive Approaches

Life Cycle & Focus Areas (formerly Process Groups)

Fundamental Concepts in Project Management (Refresher)

Key Concept: In the 8th Edition, the classic process groups are reintroduced as **Focus Areas** to show they are method-agnostic.

The 5 Focus Areas:

Initiating: Authorization of the project/phase.

Planning: Establishing scope and course of action (Progressive Elaboration).

Executing: Performing the work according to the plan.

Monitoring and Controlling: Tracking, reviewing, and regulating progress.

Closing: Formally completing the project.

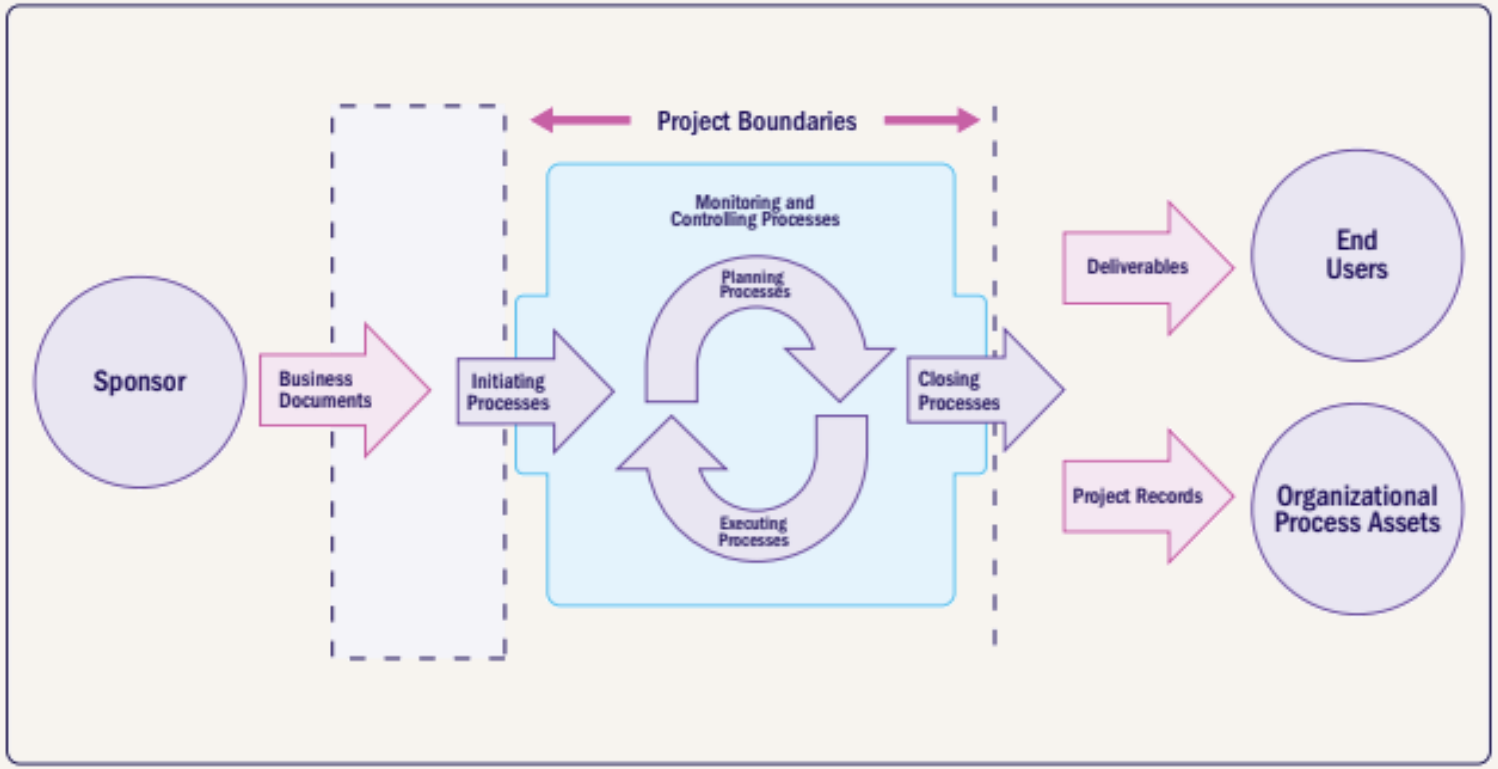


Figure 4-12. Project Boundaries

Tools I – Structure & Scheduling

Fundamental Concepts in Project Management (Refresher)

Work Breakdown Structure (WBS):

Hierarchical decomposition of the total project scope into work packages.

Example: Figure 5-6.

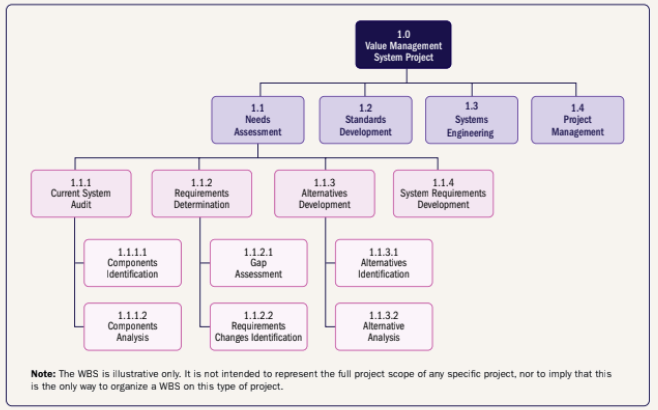
Critical Path Method (CPM):

Determines the shortest possible project duration via the longest path of activities (Zero Float).

Forward pass (Early Start/Finish) and Backward pass (Late Start/Finish).

Gantt Chart:

Bar chart representing schedule information (activities on vertical axis, dates on horizontal axis).



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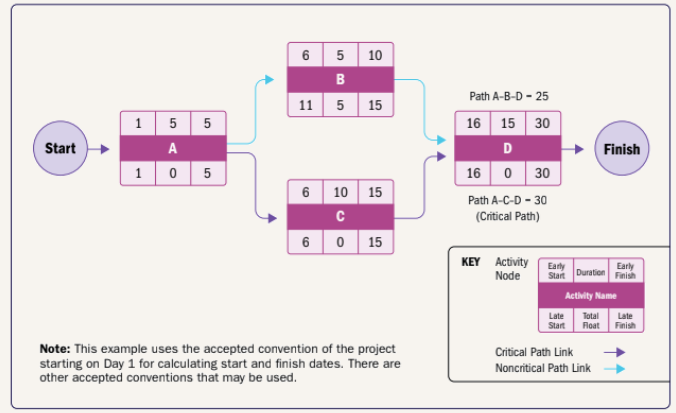

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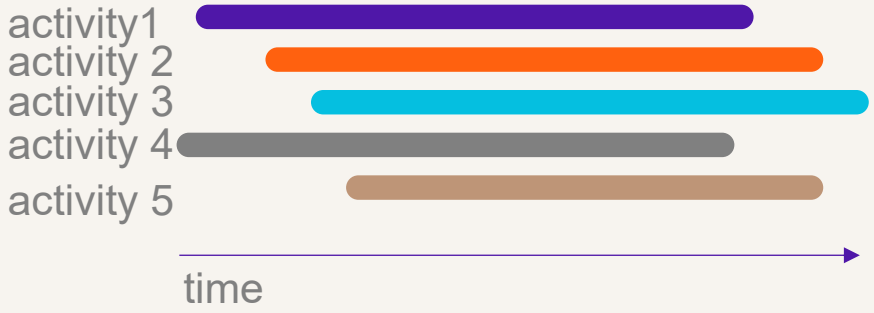

Tools II – Earned Value Management (EVM)

Fundamental Concepts in Project Management (Refresher)

Concept: Integrates scope, schedule, and cost baselines for objective performance measurement.

Key Metrics (Table 5-1):

PV (Planned Value): The authorized budget assigned to scheduled work.

EV (Earned Value): The measure of work performed expressed in terms of the budget.

AC (Actual Cost): The realized cost incurred for the work performed.

Variance & Indices (Essential for the Exam!) , ,:

SV (Schedule Variance): EV – PV (Negative = Behind schedule).

CV (Cost Variance): EV – AC (Negative = Over budget).

SPI (Schedule Performance Index): EV / PV (< 1.0 = Behind schedule).

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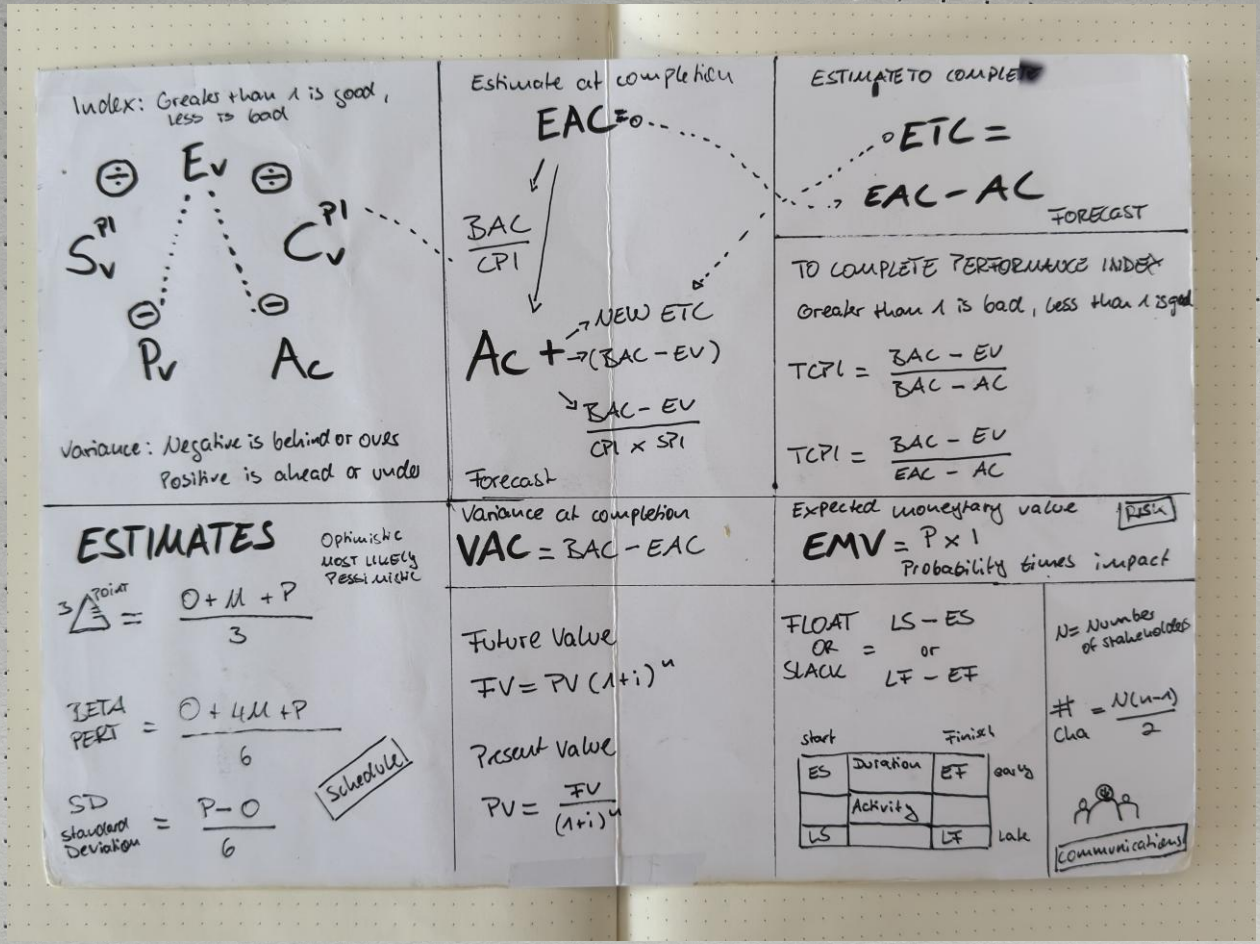
Create your own Cheat-Sheet

Fundamental Concepts in Project Management (Refresher)

My Cheat Sheet during the PMP Prep Phase in 2021



Stakeholder Engagement

Fundamental Concepts in Project Management (Refresher)

Importance: Stakeholders can affect or be affected by a decision, activity, or outcome of a project.

Processes: Identify, Plan Engagement, Manage Engagement, Monitor Engagement.

Tool: Stakeholder Engagement Assessment Matrix:

Comparison of current (C) and desired (D) engagement levels.

Categories: Unaware, Resistant, Neutral, Supportive, Leading.

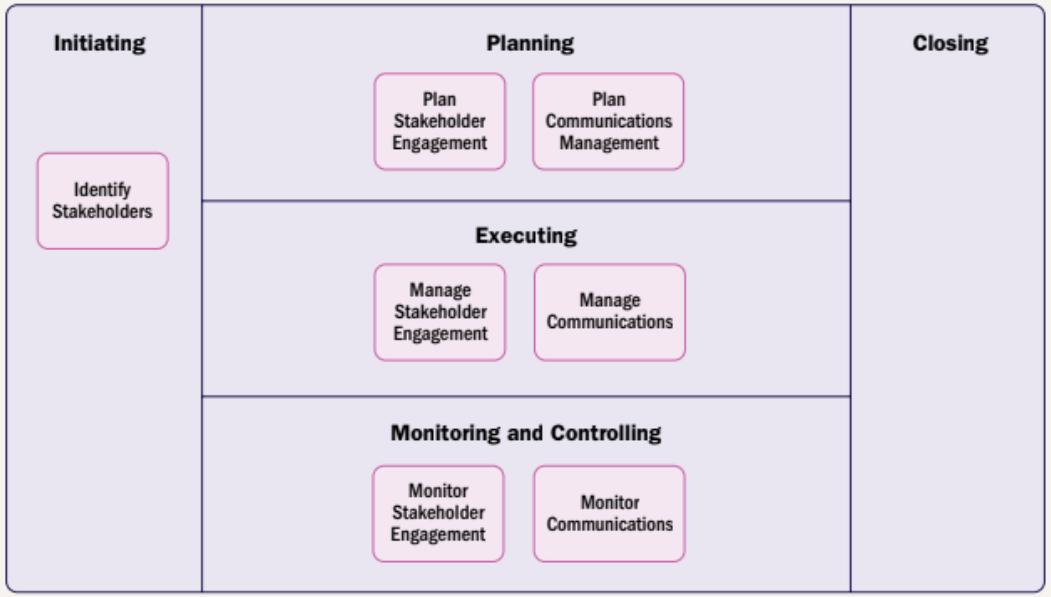


Figure 2-32. Stakeholders Performance Domain Processes Overview

Stakeholder	Unaware	Resistant	Neutral	Supportive	Leading
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Stakeholder 2			C	D	
Stakeholder 3				D C	

Figure 5-23. Stakeholder Engagement Assessment Matrix

Summary & Closing

Fundamental Concepts in Project Management (Refresher)

Principles guide behavior (e.g., "Focus on Value", "Build an Empowered Culture")

Tailoring is necessary – adapt the approach based on the project context.

The PMBOK Guide is method-agnostic (**focus on value delivery** rather than rigid processes).

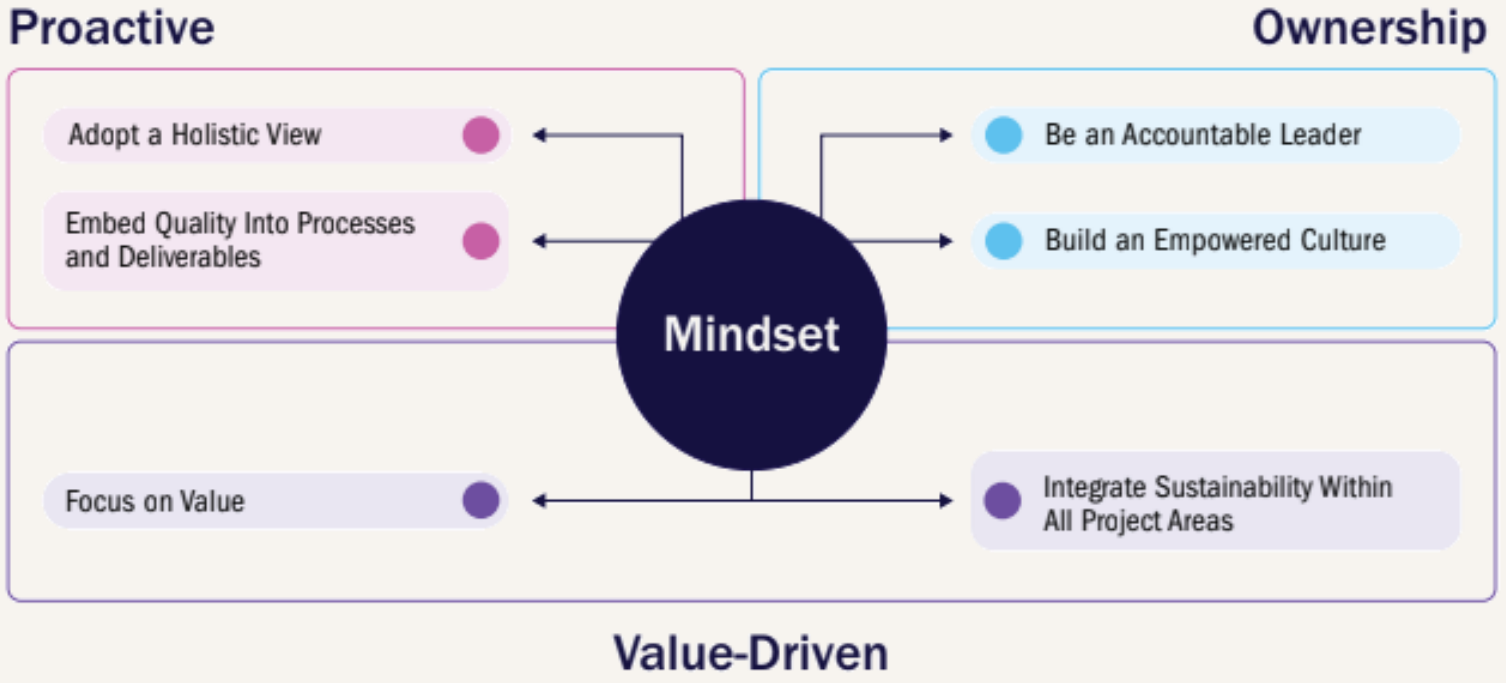

Figure 3-1. The Project Management Mindset

Q&A

