ALVIN'S CHEATSHEET

PMBOK® Guide 7th Edition

FIRST EDITION

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PMBOK® Guide 7th Edition Overview

- Section #1: Standard for Project Management
 - o How do we deliver value to our organizations?
 - Twelve (12) Project Management Principles
 - These principles guide our behavior to lead teams, manage projects, solve issues, and make decisions
- Section #2: Guide to the Project Management Body of Knowledge
 - o Eight (8) Performance Domains
 - o How to Tailor your approach?
 - o Models, Methods, Artifacts

Section #1: Standard for Project Management

- System for Delivering Value
 - Value is created by developing a new product, service, or result that satisfies a customer's needs, streamlining processes, driving efficiencies, or helping an organization grow their revenue/brand
 - System = Projects + Programs + Portfolios must all align with the organization's vision
 - Information Flow: Information is continuously exchanged up and down an organization's ladder
 - What factors influence a project's likelihood of being successful?
 - Coordination of everyone's efforts
 - Regular rhythm of obtaining customer feedback
 - Facilitating & supporting everyone's performance, so decisions can be made quickly and work is completed on time
 - Work Performance
 - Expertise with people on your team who have the right level of knowledge
 - Business Direction (i.e. knowing what requirements to follow to meet the customer's needs, and how this is related to the organization's vision)
 - Resource Allocation
 - Organizational Governance



- Internal vs External Environment
 - Internal = Anything inherent to an organization
 - Ex: Organizational Process assets (templates, procedures, policies), organization's structure, artifacts, software tools
 - External = Anything outside of the organization's control
 - Ex: Trends in market, anything related to politics/economy/social trends, governmental regulations
- Difference between Product Management vs Project Management
 - Product Management = Steps to develop a product through its entire product lifecycle (infancy > growth > maturity > obsolescence > retirement)
 - Project Management = Leading a team to accomplish a temporary endeavor to complete it on-time, within budget & within scope, and meeting all requirements

• Project Management Principles

- o #1: Be a diligent, respectful, caring steward
 - Act with integrity, care, and honesty
 - Take ownership of your own actions
- o #2: Create a Collaborative team environment
 - Foster everyone's growth and allow for a free flow of information
 - Celebrate team's wins and encourage the team
- o #3: Engage stakeholders
 - Proactively engage stakeholders to ensure the right value is being delivered to the business and to the customers
- #4: Focus on Value
 - To make sure you deliver the right value, create a Business Case to ensure everyone's aligned on the Return on Investment and Key Performance Indicators toward success
 - Continuously evaluate your project's performance and verify whether or not you're on track to achieve the desired outcomes
 - Value is delivered throughout the project (agile) or towards the end of the project (traditional/predictive)
- #5: Recognize, evaluate, and respond to system interactions
 - View a project as a "system" with its own internal and external components that are linked to each other
 - Example: Portfolio > Program > Project
 - Each level is interconnected with each other, and influences each other to drive success
 - Use a systems-level thinking so you're always aware of changing dynamics across all levels... Think from a big picture (i.e. the 100,00 foot level)
- o #6: Act like a Leader
 - Being authoritative is different than actually acting like a Leader
 - A Leader is someone who demonstrates...
 - Vision
 - Creativity
 - Motivation
 - Encouragement
 - Empathy



- In one sentence, a leader influences, motivates, and directs people towards one goal.
- o #7: Tailor based on Context
 - Every project should be tailored because each project is unique
 - Tailoring is a continuous process
- #8: Build Quality into Processes & Deliverables
 - Definition of Quality = Set of characteristics of a product, service, or result that meets the defined requirements.
 - Product Quality is measured through... Inspection and testing activities
 - Process Quality is measured through... Process reviews and audits.
- #9: Navigate Complexity
 - Complexity = Anything difficult to control due to its inherent uncertainty and obscurity with technology, people involved, and environment
 - We can't control how complex something is, but we can focus our activities towards <u>decreasing the severity</u> of the impact
- o #10: Optimize Risk Responses
 - Goal with Risk Management: Increase the impact of positive risks, and decrease the severity of negative risks
- #11: Embrace Adaptability & Resiliency
 - Goal: Help the team recover quickly from issues and respond to a dynamic & continuously changing environment
- #12: Enable change to achieve the envisioned future state
 - As Project Managers, we are Change Agents and we should do our best to help our team transition from a current state to a desired future state
 - Think to yourself, "How can we facilitate the adoption of change more easily?"

Section #2: Guide to Project Management Body of Knowledge

Domain #1: Stakeholder

- Stakeholder Definition: Anyone who may impact or be impacted by the outcome or an activity from a project
- Process to Engage Stakeholders
 - Step 1. Identify who will be on the team and the end users.
 - Step 2. Understand everyone's needs and interests.
 - Step 3. Analyze each stakeholder based on their interest and influence level.
 - Step 4. Prioritize stakeholders who have a HIGH level of power and interest
 - Step 5. Engage stakeholders based on their preferred communication style and approach
 - Step 6. Monitor how stakeholders change during the lifecycle of the project.

• Domain #2: Team

- How do you build a team that is high performing and takes full ownership of their work?
- Management vs Leadership



- **Management**: Makes sure the project's goals are met through the organization's processes and by coordinating with the stakeholders
- Leadership: Focused on the people doing the work, by influencing and actively listening to others
- Traits of a Leader
 - 1. Establishes the vision for the team
 - 2. Applies critical thinking to make decisions and solve problems
 - 3. Motivates others
 - 4. Has a strong demonstration of Interpersonal skills
 - Emotional Intelligence
 - Decision making
 - Conflict resolution
- o Emotional Intelligence Areas
 - Area #1: Self-awareness Being aware of your own emotions, feelings, strengths & weaknesses
 - Area #2: Self-management Being able to control your own feelings and how you physically act & make decisions
 - Area #3: Social awareness Being aware of other people's feelings and emotions.
 - Area #4: Social Skill How good are you at building rapport with others?

• Domain #3: Development Approach & Lifecycle

- o Approach 1: Predictive/Waterfall
 - Used for stable projects, with low likelihood of requirements changing
 - Upfront planning at the beginning of the project (scope, schedule, budget)
 - Each phase is only performed once
 - Changes are controlled with Change Requests using a Change Control Process
- Approach 2: Adaptive = Iterative + Incremental
 - Used for projects where requirements are highly likely to change
 - Use a servant leadership approach, with self-managing teams
 - Iterative
 - A fully functional deliverable is created after EVERY iteration
 - Incremental
 - Certain steps (such as plan, design, and build) are repeated, where future builds add more features onto the previous versions
- o Approach #3: Hybrid
 - Mixture of predictive + agile elements
 - Could use a waterfall approach to deploy a product to the customer, and an agile approach to develop & test the features of the product over iterations

• Domain #4: Planning

- Project planning may be high-level initially, and then progressively elaborated as more information is discovered
- Key take-away: Plan at the right level of detail, so that you can move forward with the project
- o Key Vocabulary for Estimation
 - Effort labor hours to complete a task



- Duration how many days will it take to complete a task
- Cost how much will this material cost?
- Resources Material & People to complete a task
- Accuracy How correct is the value?
- Precision The "degree" of exactness
- Confidence level
- Creating Schedules
 - Schedule Compression Techniques
 - Crashing Shortens the duration of a task for the least amount of cost by adding resources to complete it
 - **Fast Tracking** Shortens the length of a task by having tasks be performed in parallel
 - Lead vs Lag
 - A lead accelerates when a successor activity can begin by having it start BEFORE the predecessor activity has finished
 - A **lag** delays when a successor activity can begin (typically done with Finish-to-Finish or Start-to-Start Relationships)
 - Dependencies
 - Mandatory Dependency A relationship between two tasks that is mandatory and cannot be changed.
 - Discretionary Dependency A relationship between two tasks that is based on best practices
 - External Dependency Relationship between project and nonproject activities
 - Internal Dependency Relationship between project activities
- o Creating Project Budget
 - Project Budget = Cost Baseline + Contingency Reserve
 - Total Budget Amount = Project Budget + Management Reserves
- Communication Planning
 - Create a Communication Plan that addresses...
 - WHO will provide the information
 - WHAT information needs to be provided
 - WHAT is the best way to communicate the information
 - HOW OFTEN will the information be communicated

• Domain #5: Project Work

- Key take-away: Use the correct processes (as efficiently as possible) to manage and perform the project's work, so you can optimize your team's performance and drive execution
- Tailor the processes you need to eliminate bottlenecks and remove non-value added activities
- Project Management is a balancing act you will have to make tradeoffs and compromise with other people to deliver the highest quality possible, while still meeting your customer's needs
- o 90% of a Project Manager's job is communicating with stakeholders
 - Always make sure your intended audience receives and understands the message you sent
- Procurement Management Bidding Process
 - #1. Develop Bid Documents
 - RFI (Request for Information)



- RFO (Request for Ouote)
- RFP (Request for Proposal)
- #2. Hold a bidder conference to allow time for vendors to provide their proposed solution
- #3. Choose a Vendor based upon a set criteria
- #4. Award the contract to the selected Vendor
- #5. Integrate the vendor into the project plan
- o Facilitating Knowledge Transfer with your team
 - **Explicit Knowledge** = Information that can be easily expressed and translated into text and images and distributed to others
 - Tacit Knowledge = Information that is more difficult to express into text and images, because it's based on a person's experience and point of view

• Domain #6: Delivery

- Question: How do we deliver the project's scope and meet the highest quality standard to the customer?
- o How value is delivered is based on the approach being used...
 - Predictive Approach Deliverables are delivered to the customer at the end of a project
 - Adaptive Approach Deliverables are shown to the customer continuously throughout the project's lifecycle
- o Understanding the Requirements
 - 1. Collect requirements through interviews, focus groups, and process observation
 - 2. Discover requirements by using prototypes and mock-ups with customers
 - 3. Document and manage requirements into Requirements Traceability Matrix, Backlog, or something similar
- Defining the Project's Scope
 - 1. Break down the Scope using...
 - <u>Scope Statement</u> What are the deliverables and their acceptance criteria in order to be considered successful?
 - WBS (Work Breakdown Structure) Decompose the team's work down to the Work Package Level
 - Agile Way: Themes > Epics > Features > Multiple User Stories
 - 2. Complete the Deliverables, ensuring it meets the Acceptance Criteria and Definition of Done
- Cost of Quality Investing the right amount of funds to prevent failures and avoid defects from reaching the hands of the customers

Category 1: Internal Failure

- Goal: Correct defects <u>before</u> the customer receives the final product
- Example: Scrap, waste, rework

Category 2: External Failure

- Occurs when products that do NOT meet the quality standards and are discovered AFTER the customer receives the product
- Example: damaged reputation, returns & complaints, warranty claims, repairs
- Category 3: Prevention



- Goal: Prevent quality issues from being created in the product in the first place.
- Example: Training and quality planning
- Category 4: Appraisal
 - Involves inspecting and verifying that the product meets specifications
 - Example: audits and inspections

• Domain #7: Measurement

- Key take-away: Are you evaluating your performance and taking action to sustain it?
- o Goal: Measure the <u>right</u> metrics and communicate it appropriately to the team
 - Follow the SMART method: Specific, Measurable, Achievable, Relevant, Time-bound
- o Key Performance Indicators, KPI
 - Leading Indicator predicts when performance may deviate negatively
 - Lagging indicator provides information AFTER an event has occurred
- Examples of metrics
 - Baseline
 - Schedule and Costs: Planned vs Actual... Duration and Effort, Start and Finish Dates
 - Schedule and Cost Variance
 - Schedule and Cost Performance Index
 - Business Value
 - Cost-Benefit Ratio
 - Net Present Value
 - Planned vs Actual Benefits Delivery
 - Return on Investment
 - Deliverables
 - Defects & Errors; Performance Measures
 - Delivery
 - Batch Size, Queue Size
 - Cycle Time, Lead Time
 - Process Efficiency, Work In Progress
 - Resource
 - Planned Resource Usage vs Actual Resource Usage
 - Usage and Price Variance
 - Stakeholder
 - Mood Chart, Morale, Net Promoter Score, Turnover Rate
 - Forecast
 - Estimate to Complete, Estimate at Completion
 - Variance at Completion
 - To-Complete-Performance Index
- Visual Controls
 - Burnup Chart How much work <u>has been completed</u>, compared to the planned work which should be done
 - Burndown Charts How much work remains to be completed
 - Kanban Board to visualize everyone's progress on their tasks



• Domain #8: Uncertainty

- How do you navigate environments filled with uncertainty?
 - Understand the context of the project you're leading
 - Obtain information by collecting data and researching
 - Plan ahead for multiple outcomes
 - Investigate multiple designs, and identify what needs to be compromised
 - Be resilient and be willing to learn & fail quickly
- Risk = an element of uncertainty
 - Negative risk = threats; Positive risk = opportunities
 - All projects have risks with different levels of uncertainty
- o Strategies to deal with Negative Risks / Threats
 - Accept Accepts that the threat will take place, but does NOT take any action to prevent it from happening
 - Avoid Eliminates and shields the project from this threat
 - Escalate Escalating up to Leadership, if a threat is beyond the responsibilities of the project manager
 - Mitigate Decrease the likelihood and impact that a threat may have
 - Transfer Give ownership of managing and bearing the impact to a third party
- o Strategies to deal with Positive Risks / Opportunities
 - Accept Acknowledge the opportunity, but don't take any action
 - Enhance Take action to increase the likelihood of the opportunity happening
 - Exploit The team does EVERYTHING in their power to make sure the opportunity occurs
 - Escalate Escalating the opportunity to Leadership
 - Share Give partial ownership to another third party
- o Management vs Contingency Reserves
 - **Reserve** An amount of funds or time allocated to responding to risks
 - Management Reserve An amount of funds or time to address "unknown unknown" risks (in other words. unforeseen work), if they
 - **Contingency Reserve** An amount of funds or time to address "known unknown" risks, which the team has identified and is planning for

