# Project Management Overview

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# the Learning Process
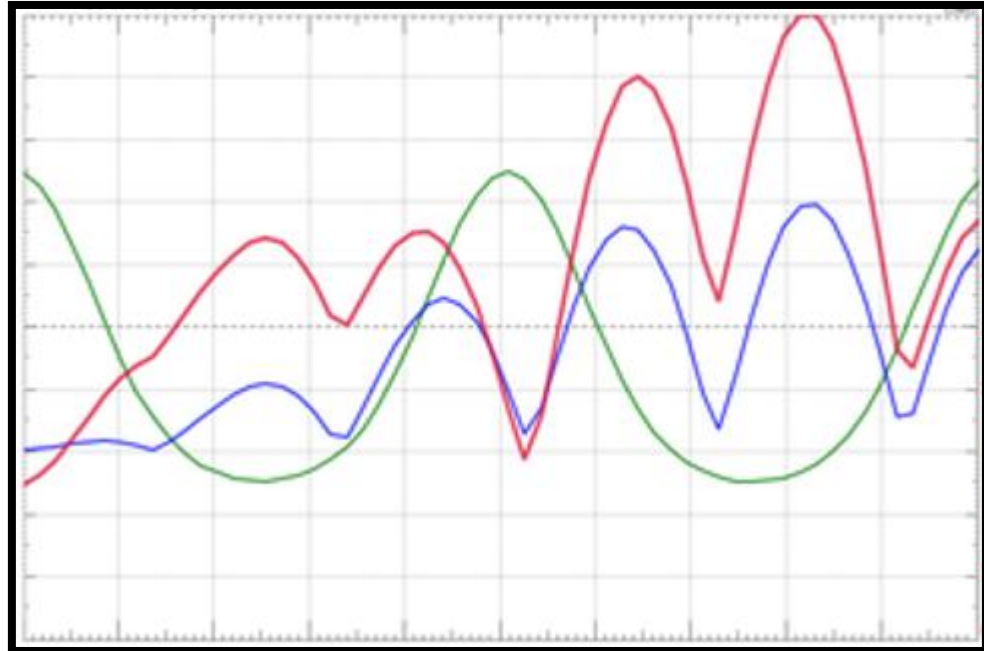
## Learning methodology



**Course Duration**

**Green** – Textbook Readings
          & Lectures

**Blue** – Supplemental Materials

**Red** – Additional Reading & Online Research

*Goal: Combine all three sources to learn*

Assignments are based upon applying concepts from the lectures, the textbook and openly available materials.

# the Learning Process

- Adaptive
- Interactive
- Discussion and Practice Oriented
- Concept-driven
- Small team Case Study & Implementation

# Brief Description: the Project Manager

The Project Manager typically works through a project team consisting of individuals with diverse backgrounds, education, experiences, and interests. One secret to successful project implementation is the project manager's ability to get this diverse set of actors performing at maximal effectiveness.

Consequently, the project manager must be both a leader and a motivator of the members of the project team. He or she is often required to work through others while possessing minimal legitimate line authority over their actions.

Also required; a tolerance and understanding of people from different backgrounds, age groups, with different motives, and unstated constraints.

# Project Management Knowledge

**Project Management**

Definitions, relative importance, and key principles

**Project Initiation**

The project charter, stakeholder analysis, and feasibility study

**Project Planning**

Work breakdown structure, project schedule, risk management, and resource allocation

**Project Execution**

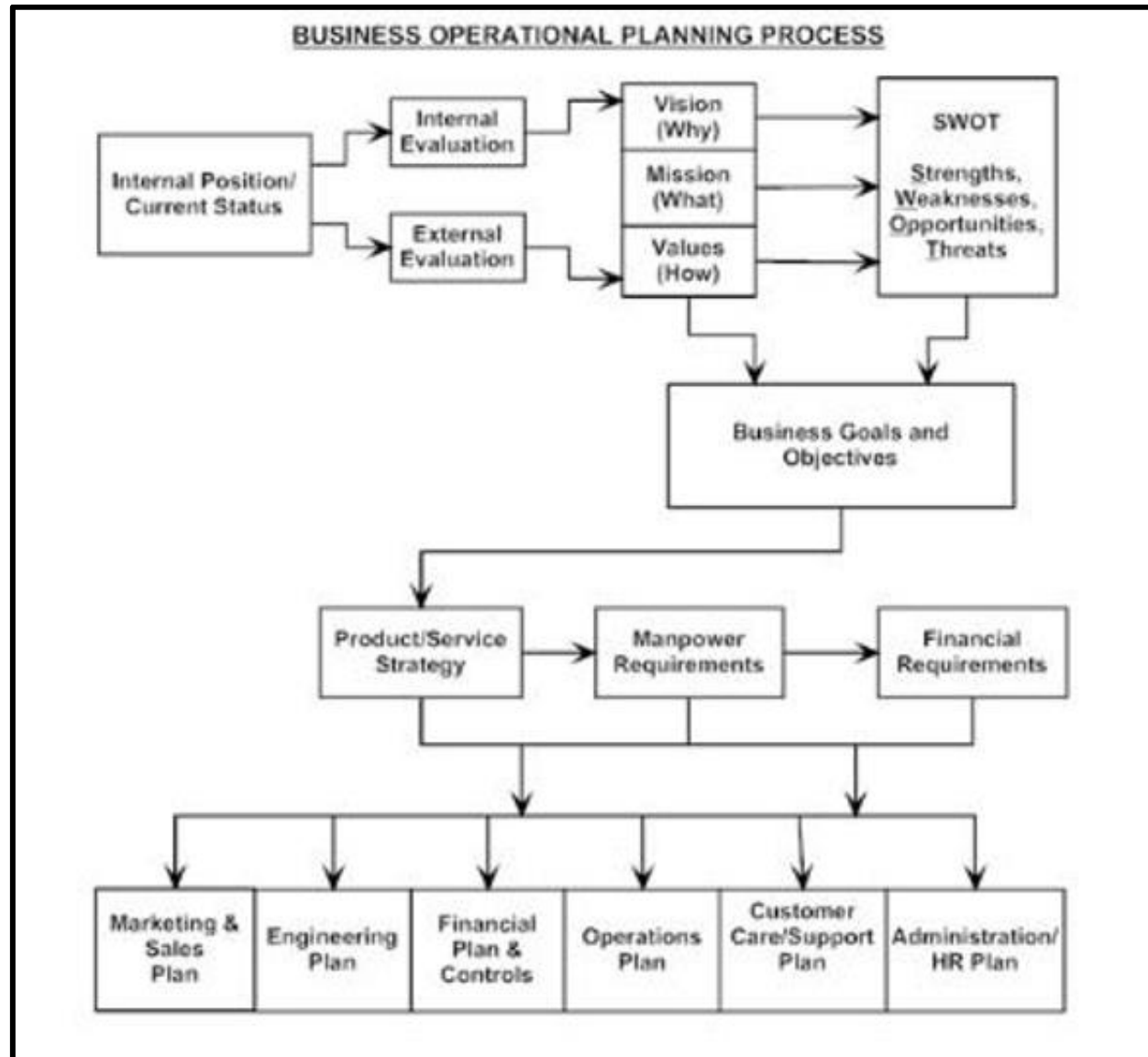Team building, communication, and project monitoring

**Project Control**

Quality control, change control, and project reporting

**Project Closure**

Project evaluation, Lessons Learned and BKMs

# Business Operations Planning

**BUSINESS OPERATIONAL PLANNING PROCESS**



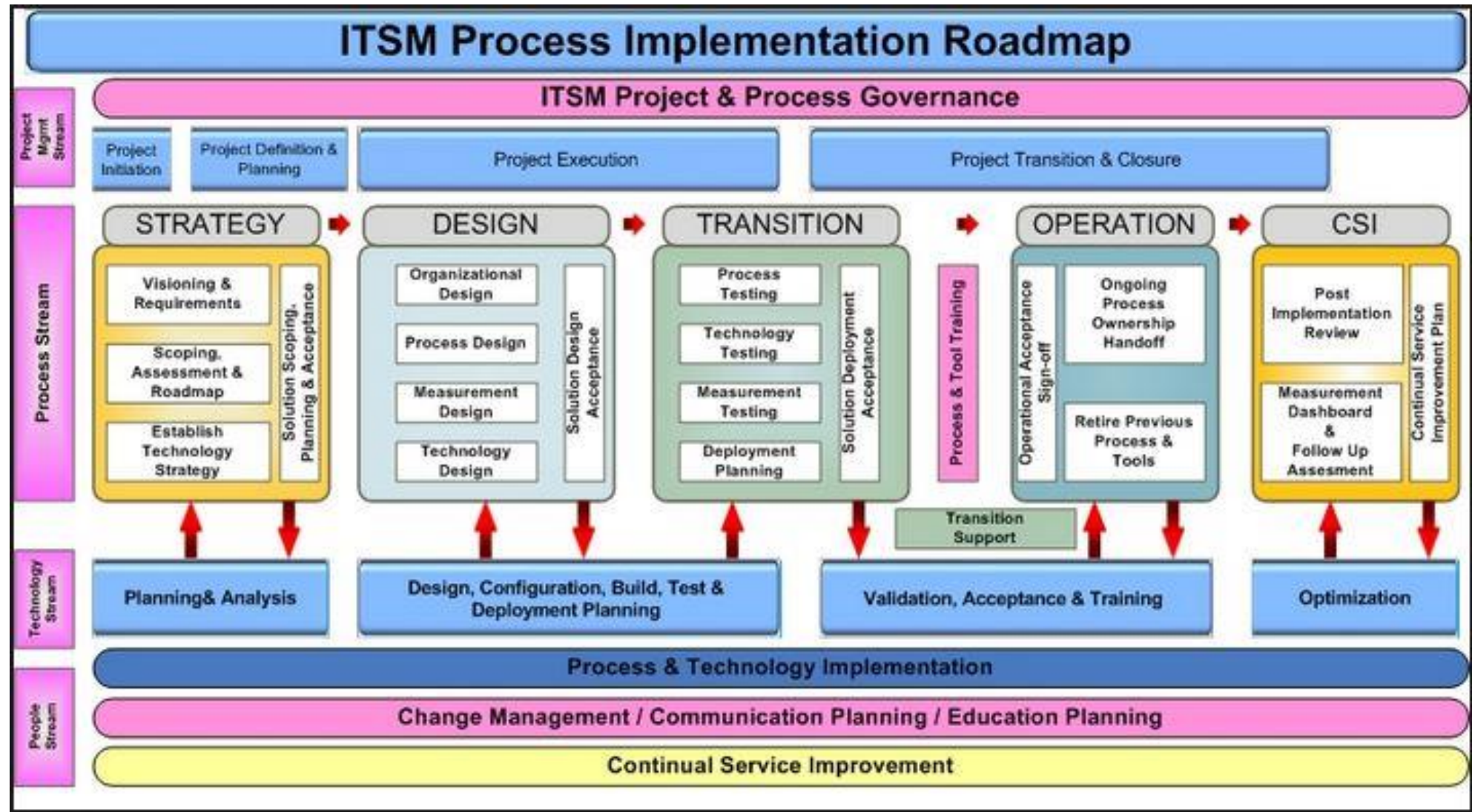Consider a High-Level View of a STEM orientated business

We start by looking at ourself and the Current State of our Capabilities and the External Business Environment

Next, we need to figure out, Why we are going, What we expect to Accomplish, and How we will Act as we Proceed with our journey

A good place to start, is to imagine All the boxes before moving ahead. Know that your initial guess may be less than 50 % accurate
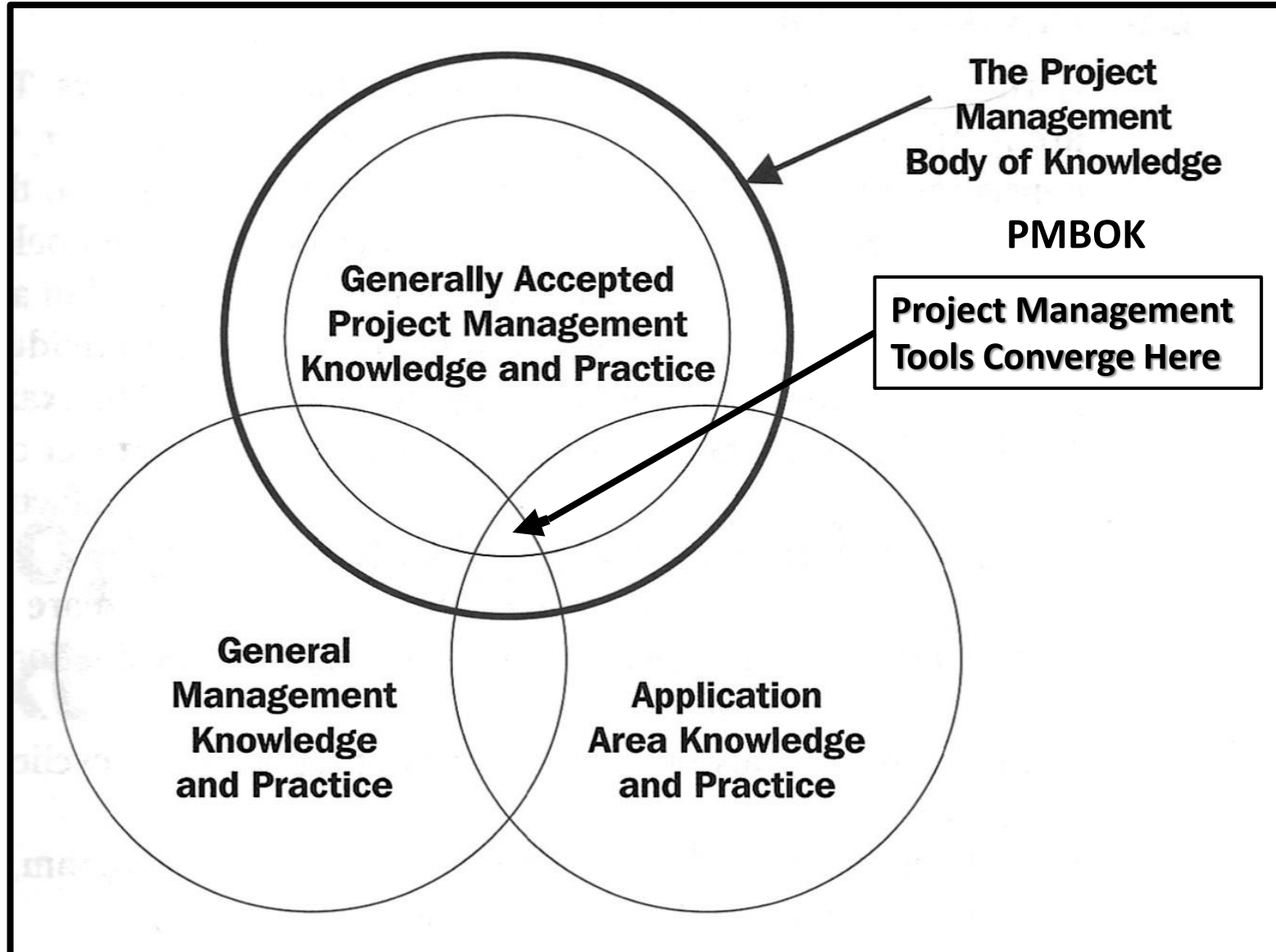
# IT Product Development example
## How IT teams manage the end-to-end delivery of IT services to customers



## ITSM Process Implementation Roadmap

### ITSM Project & Process Governance

| Project Mgmt Stream | | | |
|---|---|---|---|
| Project Initiation | Project Definition & Planning | Project Execution | Project Transition & Closure |

**Process Stream**

| STRATEGY | DESIGN | TRANSITION | | OPERATION | CSI |
|---|---|---|---|---|---|

**STRATEGY**
- Visioning & Requirements
- Scoping, Assessment & Roadmap
- Establish Technology Strategy
- Solution Scoping, Planning & Acceptance

**DESIGN**
- Organizational Design
- Process Design
- Measurement Design
- Technology Design
- Solution Design Acceptance

**TRANSITION**
- Process Testing
- Technology Testing
- Measurement Testing
- Deployment Planning
- Solution Deployment Acceptance

Process & Tool Training

**OPERATION**
- Operational Acceptance Sign-off
- Ongoing Process Ownership Handoff
- Retire Previous Process & Tools

**CSI**
- Post Implementation Review
- Measurement Dashboard & Follow Up Assessment
- Continual Service Improvement Plan

Transition Support

**Technology Stream**

| Planning& Analysis | Design, Configuration, Build, Test & Deployment Planning | Validation, Acceptance & Training | Optimization |
|---|---|---|---|

### Process & Technology Implementation

**People Stream**

### Change Management / Communication Planning / Education Planning

### Continual Service Improvement

# Business Vision, Mission & Values

- VISION – is a concise statement that defines the 3 – 5-year goals of an organization. The vision should be externally focused and contain aspirational terms of how the organization wants to be perceived by the world. ***A Vision without Action is a Daydream. Action without a Vision is a Nightmare***.

- MISSION – is a brief, one-sentence statement, that defines the Fundamental Purpose of the organization. It should include what the organization provides to it stakeholders.

- VALUES – prescribes its desired behavior, character and culture

# Project Knowledge Relationships



**The Project Management Body of Knowledge**

**PMBOK**

Generally Accepted Project Management Knowledge and Practice

**Project Management Tools Converge Here**

General Management Knowledge and Practice

Application Area Knowledge and Practice

**Organizational Silos Do Exist!**

Project Managers work cuts Diagonally across Silos to bring the needed Resources into harmony for a successful Project Outcome

# Business Operations Execution in a Technical Business



PRIORITY SETTING

Program Analysis → Portfolio Analysis → Portfolio Adjustment → Priority Assignment

STRATEGIC PLANNING

PROJECT PLANNING

Technology Forecasting

Project Analysis

Strategic Planning

Market Forecasting

Budgeting ↔ Manpower/ Resource Planning

PROJECT MANAGEMENT

Scheduling

Active Monitoring
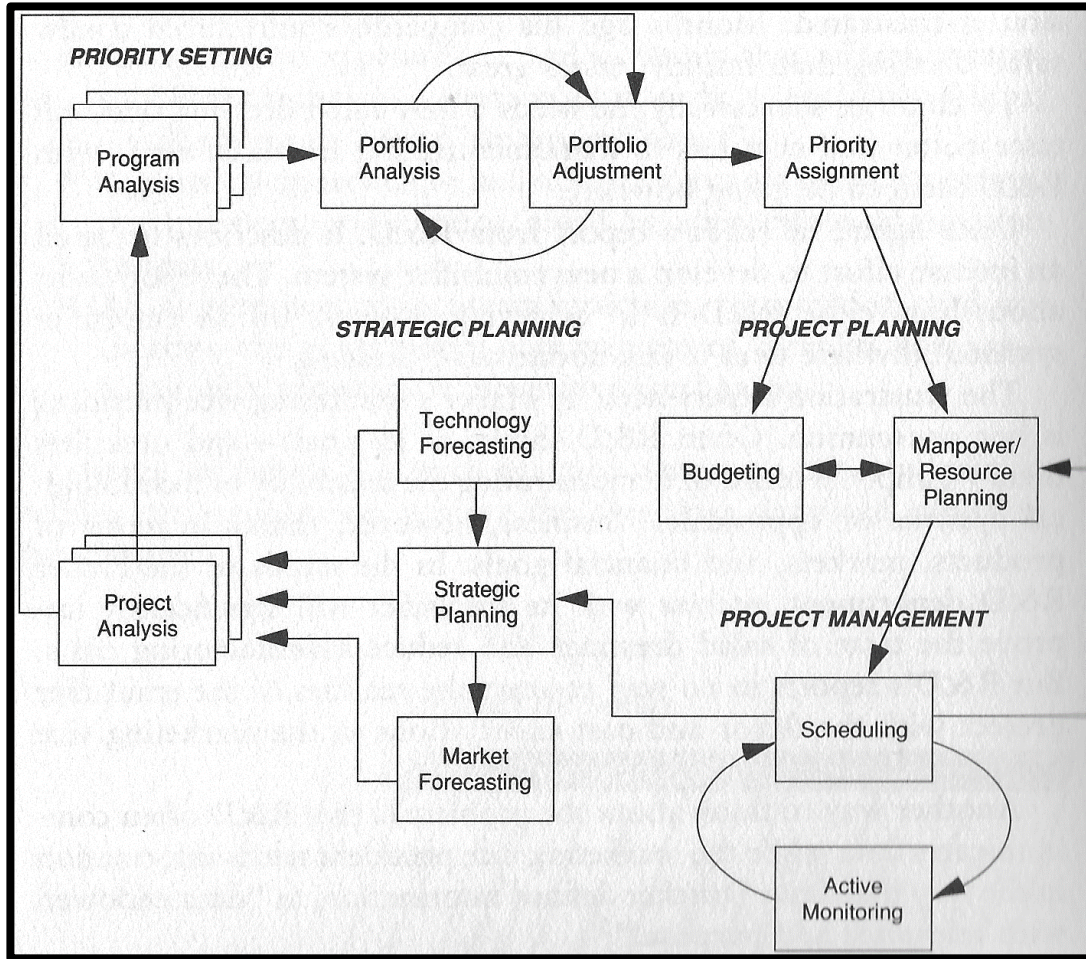
**Project Management** is embedded into the Internal workings of Businesses that use standard frameworks for organizing their Operations. It is part of a closed-loop set of activities necessary to operate any successful business.

**Portfolio Management** is the analysis, selection and the prioritization of multiple Projects.

# SCOR Model of a Product Producing Company

Before Investigating the Project Managers Role & Responsibilities, we must Investigate how the pieces of an Organization are arranged

This diagram illustrates the currently accepted conventional form of a Company that produces and supports multiple product lines

Project Managers are found in many types of companies where their precise job tasks vary based upon many unique business facets
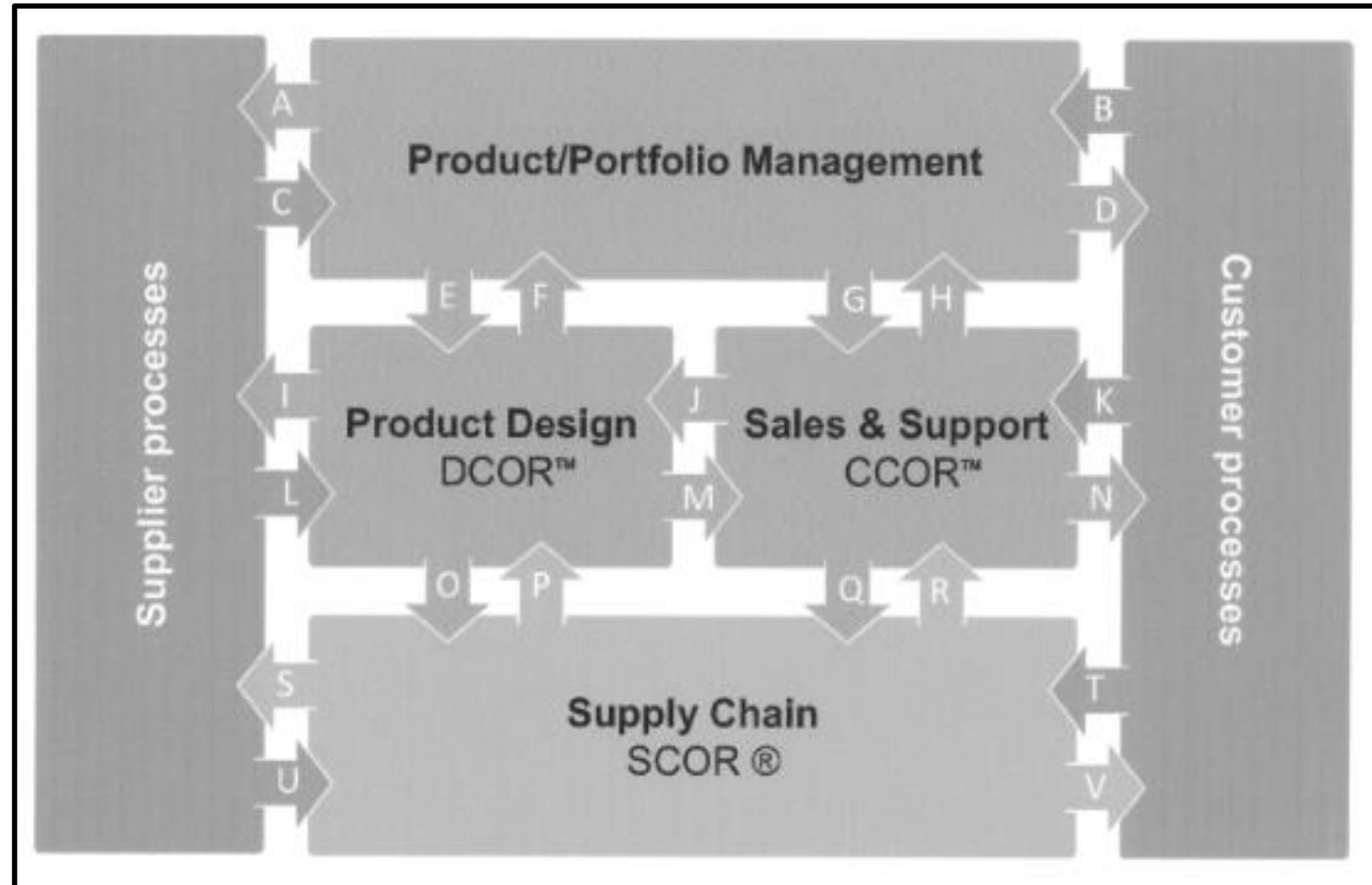


SCOR – Supply Chain Operations Reference

# What about MOTIVATION

**Consider the following:** Portfolio Managers, Product Managers, Design Engineering Managers, Project Managers, Manufacturing Managers, and others are all responsible for different facets of the Commercialization process.

Each has their own set of unique tasks. Each has some tasks that are shared with the other managers working on the new product. Each manager will use one or more *'management frameworks'* that shows up in the other managers list of responsibilities. **These analysis frameworks are the interface points** where engineering communicates with marketing, or engineering communicates with manufacturing, or portfolio managers communicate with Project Managers.

Each manager takes their disciplines **POV (Point of View)** to argue for their discipline. These arguments create a point of contention where data is examined, analysis is substantiated, negotiations occur, and tradeoffs are made. This is a well-established product design practice. You must be comfortable with ambiguity and living with the unknown to get through many contentious meetings to develop a viable product.

# Project Managers vs. Product Champions

| Project Managers | Project Champions |
|---|---|
| • Prefer to work in groups | • Prefer working individually |
| • Committed to their managerial and technical responsibilities | • Committed to technology |
| • Committed to the corporation | • Committed to the profession |
| • Seek to achieve the objective | • Seek to exceed the objective |
| • Are willing to take risks | • Are unwilling to take risks; try to test everything |
| • Seek what is possible | • Seek perfection |
| • Think in terms of short time spans | • Think in terms of long time spans |
| • Manage people | • Manage things |
| • Are committed to and pursue material values | • Are committed to and pursue intellectual values |

# Project Manager Job Description
## (Work from home, Full-time, June 2021)

• 7+ years of experience as a Technical project manager in an agile software development environment

• 4+ years of experience as a scrum master in product development projects based on micro-services

• Very good understanding of SDLC (requirement analysis, design, development and testing, implementation, documentation, and evaluation)

  The **S**ystem **D**evelopment **L**ife **C**ycle phases: **inception, design, implementation, maintenance, and audit or disposal**, including a risk assessment management plan.

• Experience using JIRA or equivalent. (Bug tracking system, project management software)

• Experience working with cross-functional teams located in multiple time-zones.

• Experience mentoring team members on agile best practices.

• Leadership skills with the ability to 'rally' project teams.

• Ability to thrive in a fast-paced, diverse environment, participating in continual process improvement.

• Knowledge and expertise on agile team metrics – Burn down charts, Cumulative Flow, Lead Team, Cycle Time, etc.ca

• Understanding of IoT Domain and Networking will be useful.

**Job Responsibilities**

• Manage Agile (Scrum & Kanban) software delivery practices and events, including planning, retrospective, backlog refinement and estimation, and release planning. Identifies action items and tracks them to completion.

• Breaks down barriers for the project team, removes impediments and blockers, and enables team success.

• Needs to work with teams spread across multiple time zones

• Creates and manages project reporting and team analytics.

• Understands and drives the software development lifecycle.

• Works directly with software development teams to ensure commitments are met and software is delivered reliably and predictably.

• Coaches team and organization on best practices in agile software project delivery.

• Escalates issues and risks when appropriate and coordinates risk response.

• Facilitate team meetings, ability to deliver well-organized presentations and lead by example.

• Encourage innovation, build strong relationships, provide constructive feedback and bring out the best in your team members.

**Education:**

• Bachelor's or Master's degree in Computer Science, Computer or Electrical Engineering, Mathematics, or a related field

# Critical Thinking for Project Managers
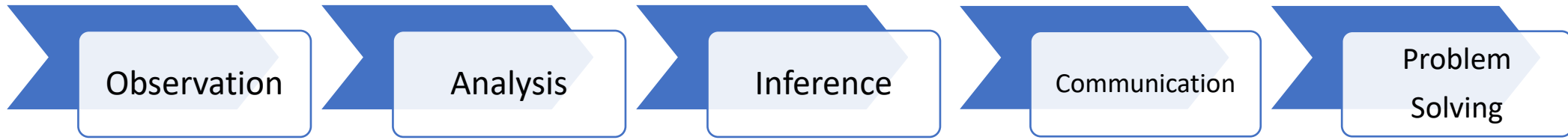


**Observation** – the ability to notice and predict opportunities

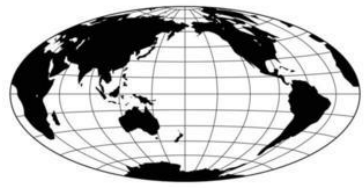**Analysis** – the gathering, understanding and interpreting data and information

**Inference** – drawing conclusions based upon relevant data, information and personal knowledge

**Communications** – receiving and sharing information with others, verbally and non-verbally
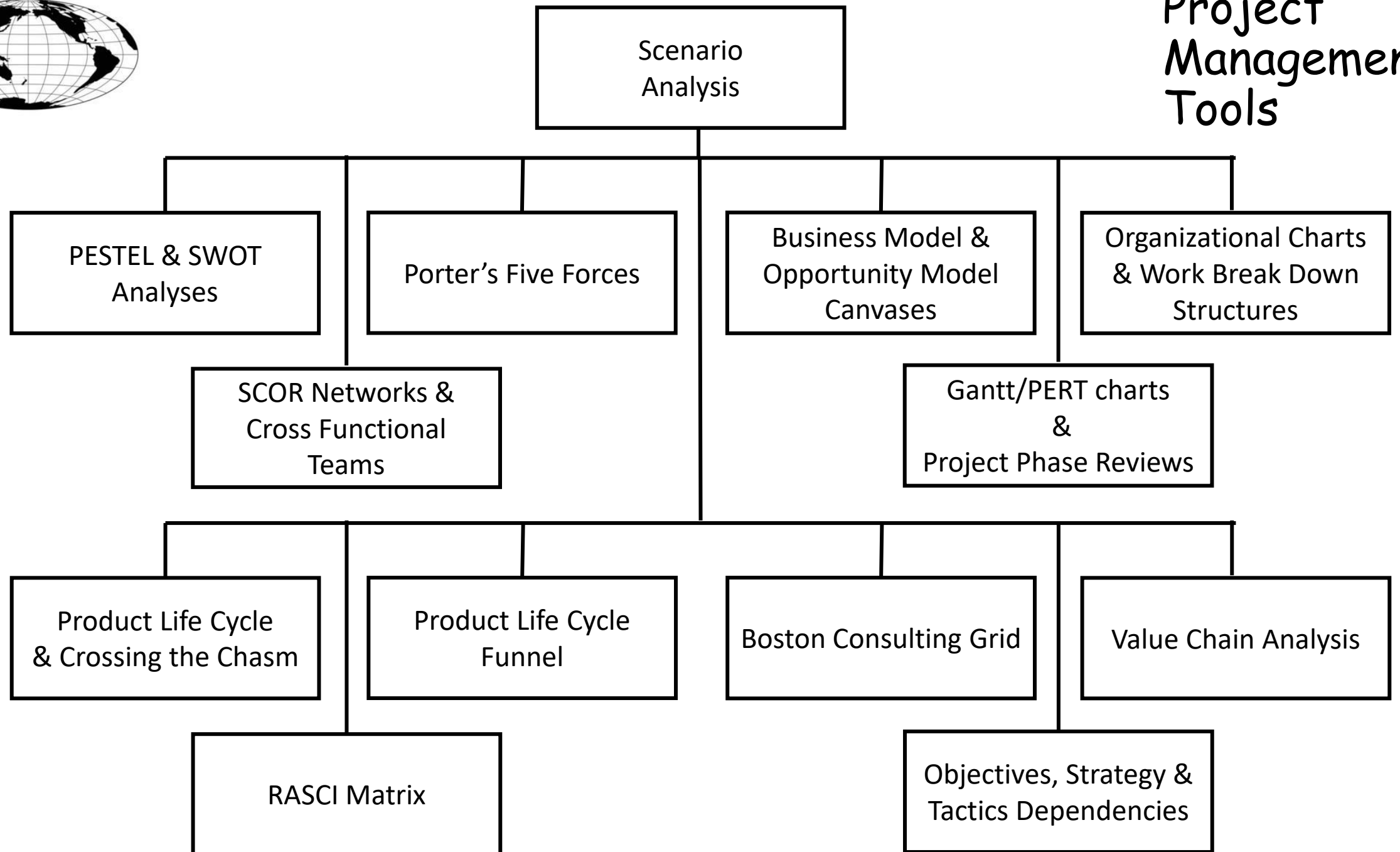
**Problem Solving** – processing and analyzing information to develop solutions for opportunities or problems

# Critical Thought is:

- *Accurate.* Critical thinkers are careful to use true information. Critical thinkers confirm what they believe with facts. They are not easily misled by misinformation.

- *Clear.* Critical thinkers communicate in ways that are appropriate for their audiences. You never have to guess what critical thinkers mean because they are easily understood.

- *Consistent.* Critical thinkers always work in orderly and methodical manners. They may change their minds, but they do not contradict themselves.

- *Logical.* Critical thinkers put information together in orderly ways. They construct detailed arguments with no gaps or jumps.

- *Objective.* Critical thinkers put aside personal feelings and opinions. Critical thinkers look at issues from every point of view to make sure they have all the relevant information.

- *Persistent.* Critical thinkers overcome whatever obstacles they encounter. They continue to think critically until they reach logical conclusions.

- *Precise.* Critical thinkers use clear and specific ideas and language. You never have to guess what critical thinkers mean. They get straight to the point.

- *Reflective.* Critical thinkers always monitor their thinking while focusing on tasks at hand. They consistently evaluate the effectiveness of their thoughts and actions.

- *Relevant.* Critical thinkers only use important information. They connect specific details to main ideas and show how main ideas relate to one another.

Project Management Tools

- Scenario Analysis
- PESTEL & SWOT Analyses
- Porter's Five Forces
- Business Model & Opportunity Model Canvases
- Organizational Charts & Work Break Down Structures
- SCOR Networks & Cross Functional Teams
- Gantt/PERT charts & Project Phase Reviews
- Product Life Cycle & Crossing the Chasm
- Product Life Cycle Funnel
- Boston Consulting Grid
- Value Chain Analysis
- RASCI Matrix
- Objectives, Strategy & Tactics Dependencies

End