

PROJE YÖNETİMİ VE SİSTEM MÜHENDİSLİĞİ EĞİTİMİ

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İçerik

- Project Management vs SystemsEngineering
- PMI vs INCOSE & PMP vs CSEP
- Durumları
- Güncel Proje Takvimi
- Sorular
- Teşekkürler







Design and Specialty Engineering

Project Management

Systems Engineering

Program and Portfolio Management

Cost Management

Procurement Management

Architecture Synthesis and Design

Project Charter

Integration Management

Risk Management and Analysis

Schedule Management

Test, Verification and Validation

Scope Management

Quality Management

Concept of Operations

Trade Studies

Human Resource Management

Mission and Logistics Engineering

Process Management

Stakeholder Management

Requirements Analysis and Synthesis

Requirements Management

Personnel Development

Pre-Planned Product Improvement

Communications Management

Life-Cycle Costing and System Disposal

Interfaces, Specifications and Standards

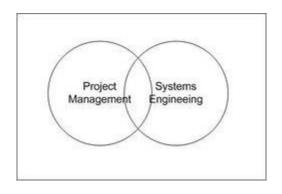
Stakeholder Analysis

Needs and Alternatives Analysis

Modeling and Simulation



While the project manager manages the project life cycle, the systems engineer manages the technical baseline of the product under development. The project manager and systems engineer share requirements management responsibility, and by working closely together they keep the project on track.





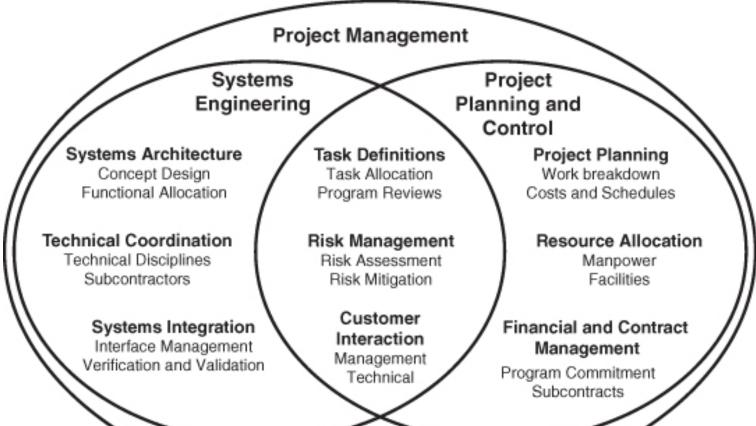
SYSTEMS ENGINEERING

- System Design
- Requirements Definition
- Technical Solution Definition
- Product Realization
- Design Realization
- Evaluation
- Product Transition
- Technical Management
 - Technical Planning
- Technical Control
- Technical Assessment
- Technical Decision Analysis

PROJECT CONTROL

- Planning
- Risk Management
- Configuration Management
- Data Management
- Assessment
- Decision Analysis

- Management Planning
- Integrated Assessment
- Schedule Management
- Configuration Management
- Resource Management
- Documentation and Data Management
- Acquisition Management





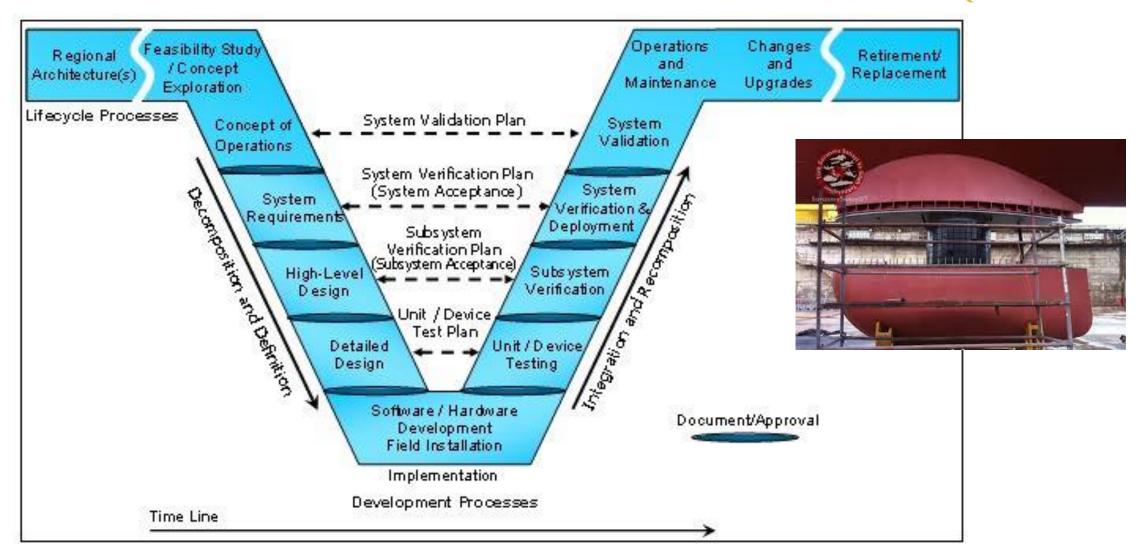




Phase -1	Phase 0	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	
Interfacing with Planning and the Regional Architecture	Concept Exploration and Benefits Analysis	Project Planning and Concept of Operations Development	System Definition and Design	System Development and Implementation	Validation, Operations and Maintenance, Changes & Upgrades	System Retirement / Replacement	
Regional Architecture	Needs Concept Assessment Selection	Systems Project Engineering Planning Managemen Planning			Operations Changes and and Maintenance Upgrades	Retirement / Replacement	
Cross-Cu	tting Activities	Concep		V.	System alidation nitial coyment wition who was a specific and the state of the stat		
Stakeholder Involvement		System Verification Plan (System Acceptance) System Verification Plan (System Acceptance) System Verification System Verification System Verification System Integration Subsystem Requirements Unit/Device Test Plan Design Unit Testing Unit Testing					
	citation	osiii/	High-Level Sub-	system Verifica	ition / §		
Project Management Practices Risk Management		Design Verification Plan (Subsystem Integration					
	anagement am Metrics	\$ \	Subsystem Accep Requirements	Subsystem Verification	\ \frac{\tau_0}{\tau}		
	on Management		Unit	Device Subsystem est Integration	J'ES		
	Improvement	27	Detailed Design	Unit Testing	/ <u>E</u>		
	Decision Gates		Software Coding Decision Gate				
Trade Studies Technical Reviews			Hardare	Fabrication			
			Life Cycle	Time Line			

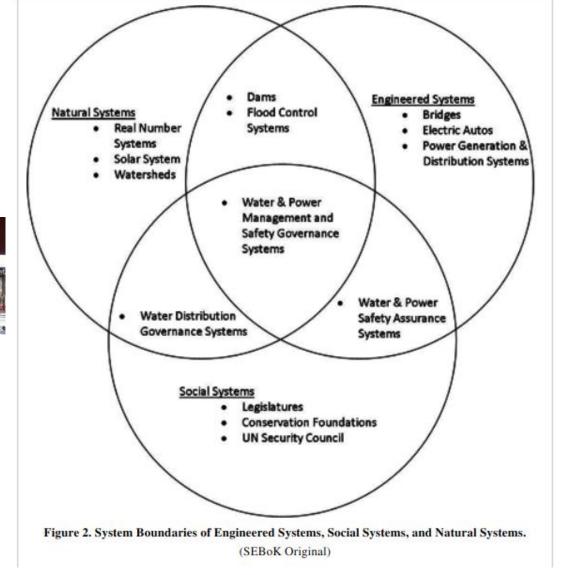
V Model





Systems Engineering – System Boundaries











Addressing the Stakeholder Problem

A Team View

Program Management and Technical View of the Problem



Compete vs Corporate



PMI vs INCOSE & PMP vs CSEP







PMP® certification is the gold standard in project management. Recognized and demanded by organizations worldwide, the PMP validates your competence to perform in the role of a project manager, leading and directing projects and teams.

What is SEP Certification?

Systems Engineering Professional (SEP) certification formally recognizes your progress through your career as you develop and apply systems engineering knowledge and practices. INCOSE offer three levels of certification ASEP, **CSEP** and ESEP.

Certification is a formal process whereby a community of knowledgeable, experienced, and skilled representatives of an organization, such as INCOSE, provides confirmation of an individual's competency (demonstrated knowledge and experience) in a specified profession. Certification differs from licensing in that licenses are permissions granted by a government entity for a person to practice within its regulatory boundaries. Certification also differs from a "certificate" that documents the successful completion of a training or education program.

System Engineering INCOSE





SEBoK (Systems Engineering Body of Konwledge) Introduction

Systems engineering (SE) is essential to the success of many human endeavors. As systems increase

in scale and complexity, SE is increasingly recognized worldwide for its importance in their development, deployment, operation, and evolution.

The purpose of the *Guide to the Systems Engineering Body of Knowledge (SEBoK)* is to provide a widely accepted,

community-based, and regularly updated baseline of SE knowledge. This baseline will strengthen the mutual understanding across the many disciplines involved in developing and operating systems. Shortfalls in such mutual understanding are a major source of system failures, which have increasingly severe impacts as systems become more global, interactive, and critical.

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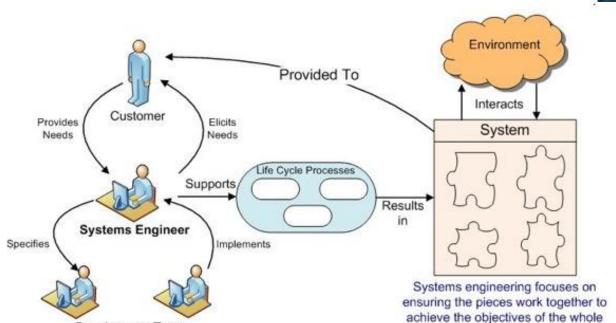
Systems Engineering - INCOSE Systems Engineering Handbook



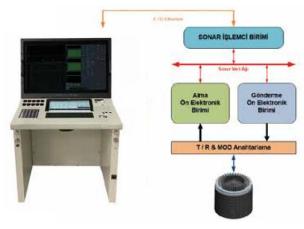
Systems Engineering (SE) is an **interdisciplinary approach** and means to **enable the realization of successful systems**.

Successful systems <u>must satisfy</u> the needs of their customers, users and other stakeholders.

Development Team







INCOSE – System Life Cycle Processes



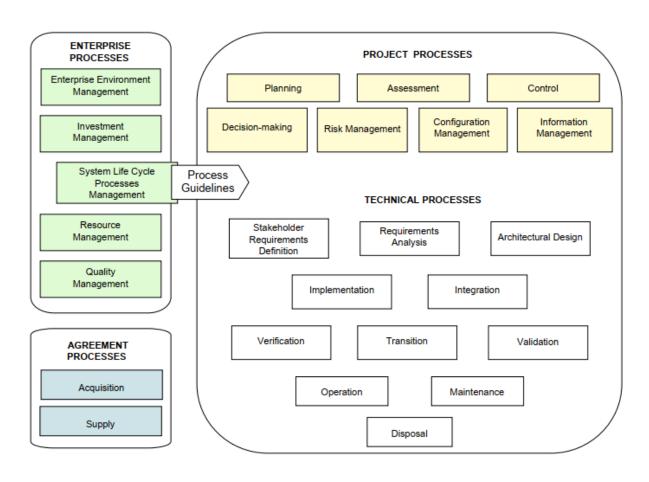


Figure 1-1 System Life Cycle Processes Overview per ISO/IEC 15288

Technical Processes include stakeholder requirements definition, requirements analysis, architectural design, implementation, integration, verification, transition, validation, operation, maintenance, and disposal.

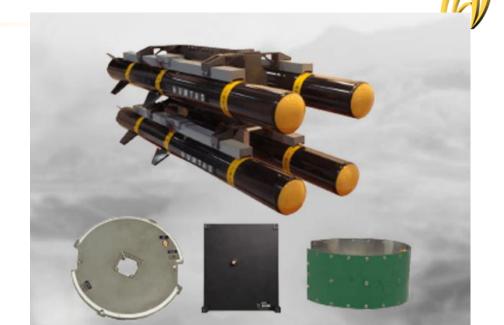
Project Processes include planning, assessment, control, decision-making, risk management, configuration management, and information management.

Enterprise Processes include enterprise management, investment management, system life cycle processes management, resource management, and quality management. As Figure 1-1 illustrates, the outputs of the system life cycle processes management process directs the tailoring of the Technical and Project processes.

Agreement Processes address acquisition and supply.

In Scope vs Out Of Scope



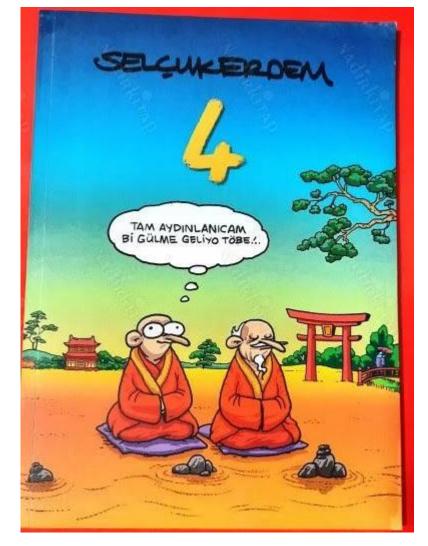




In a project environment, work necessary to accomplish project objectives is considered "in scope;" all other work is considered "out of scope." On every project, "thinking" is always "in scope." Thoughtful tailoring and intelligent application of the systems engineering process described in INCOSE handbook is essential to achieve the proper balance between the risk of missing project technical and business objectives on the one hand, and process paralysis on the other.

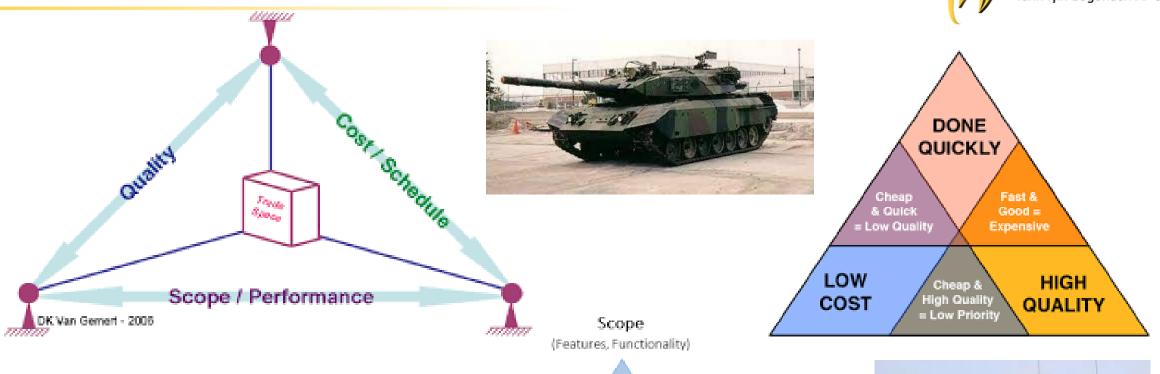


Not every process will apply universally. Careful selection from the material that follows is recommended. Reliance on process over progress will not deliver a system. If you are not familiar with tailoring concepts, please read Chapter 10 of INCOSE Systems **Engineering Handbook before using it.**

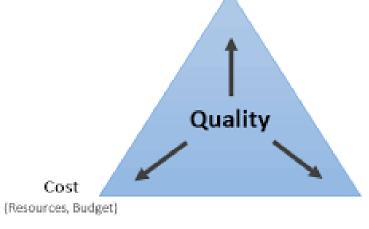


Project Management – Cost & Scope & Schedule + Quality









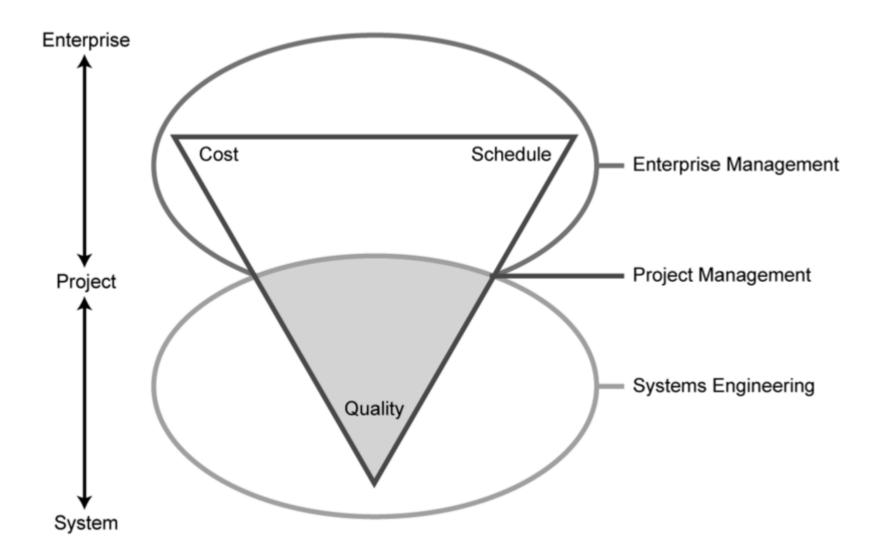


Time

(Schedule)

Project Management – Cost & Scope & Schedule + Quality











Project Management of Systems Engineering Process



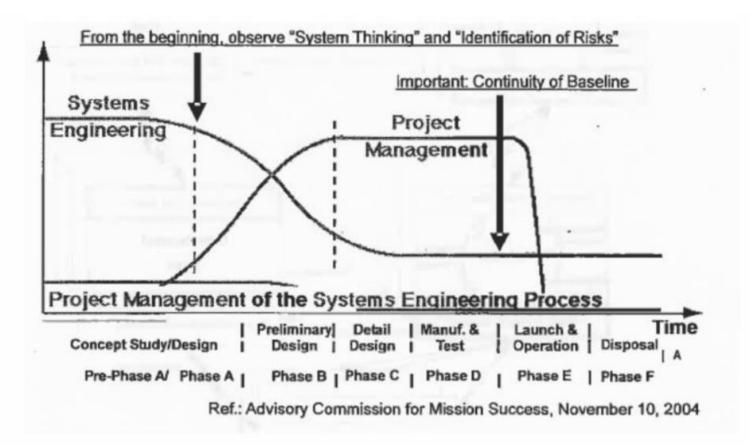


Figure 4 Project management and systems engineering in the system development process ((JAXA, 2007))







Project Management – Nominal Amount of Systems Engineering & Project Management & Engineering



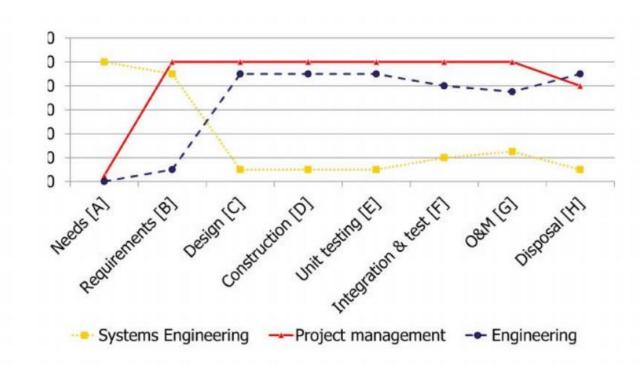


Figure 5. Representation of the nominal amount of systems engineering, project management and engineering of systems activities in the different phases of the SDP

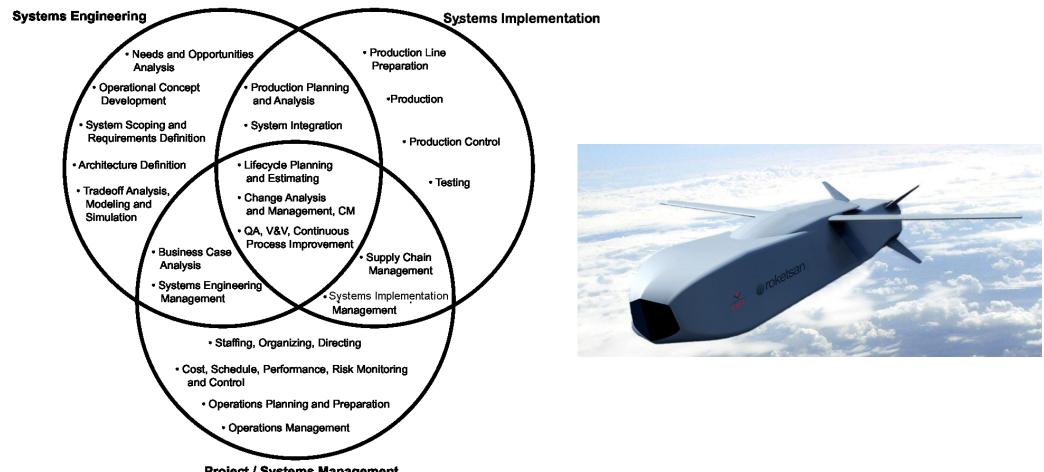






Project Management – Nominal Amount of Systems Engineering & Project Management & Engineering





Project / Systems Management

System Boundaries of Systems Engineering, Systems Implementation, and Project/Systems Management.

(SEBoK Original)

Project Management – Star Wars Analogy

















Project Management - PMO



Supportive PMO

- Low Level of control;
- · consultative role projects;
- Supplies templates, best practices, lessons learned
- Cannot enforce anything



- Moderate Control over projects
- Provides support and guidance to projects PM training; PM tool assistance
- Enforces compliance to organizational practices



- High level of control over projects
- Project managers are assigned by and report to PMO
- · PMO directly manages the projects









TEŞEKKÜRLER

