QA Testing Boot Camp

Chapter 4 – Project Management

Learning Outcomes

- What is Project Management?
- How to avoid Chaos
- Influences on the Project

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Project Management

Planning for the future has always been a human trait

Planning includes:

- Planning – deciding what's to be done
- Organizing – making arrangements
- Staffing – selecting the right people
- Directing – giving instructions
- Monitoring – checking on progress
- Controlling – taking actions to remedy holdups
- Innovating – coming up with new solutions
- Representing – liaison with users

What is Project Management

The application of knowledge, skills, tools and techniques to project activities to meet the requirements of the project.

Project management is accomplished through the use of processes such as initiating, planning, executing, controlling and closing.

Project Management Focus

- What business situation is being addressed?
- What do you need to do?
- What will you do?
- How will you do it?
- How will you know you did it?
- **How well did you do?**

What is a Project?

A **project** is an activity with specific goals which takes place over a finite period of time.

"A temporary organization that is needed to produce a unique and pre-defined outcome or result at a pre-specified time using pre-determined resources"

Projects – All Organizational Levels

They can involve a single person or thousands.

Duration can be a few weeks to more than 5 years.

Can involve a single organizational unit or may cross organizational boundaries as in joint ventures or partners.

Goals of Project Management

Project management is the discipline of defining and achieving a set of goals while optimizing the use of allocated resources (time, money, people, space, etc.).

Includes planning, scheduling and maintaining progress of the activities that comprise the project.

Reserved for focused, non-repetitive, time-limited activities with some degree of risk and that are beyond the usual scope of program (operational).

Project Characteristics

- Temporary
- Unique Product, Service or Result
- Achieves Aim, Purpose and Tasks
- Limited Time Duration
- Progressive Elaboration

Project Characteristics-Temporary

- Definite Beginning and End
- End when
  - Objectives met
  - Need no longer exists
  - Project cannot be completed
- Does not mean short in duration

Project Characteristics-Unique

- Has not been done in the same way before
- Quantifiable
- New Knowledge
- Repetitive elements does not change uniqueness

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Project Characteristics

Aim Purpose Task

- Specific Target-Specific time frame

Limited Time Scale

- Extensions and overruns discouraged

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Project Characteristics

Progressive Elaboration

- Developed in steps
- Scope defined broadly-narrowed

Four Project Dimensions

The Four P's

- People
- Product
- Process
- Project

Effective Project Management focuses on the 4-Ps.
The order above is **not** arbitrary.

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Four Project Dimensions

People

1. The Players
    - Senior Management
    - Project Management
    - Practitioners
    - Customers
2. End Users
3. Team Leaders

Four Project Dimensions

Process

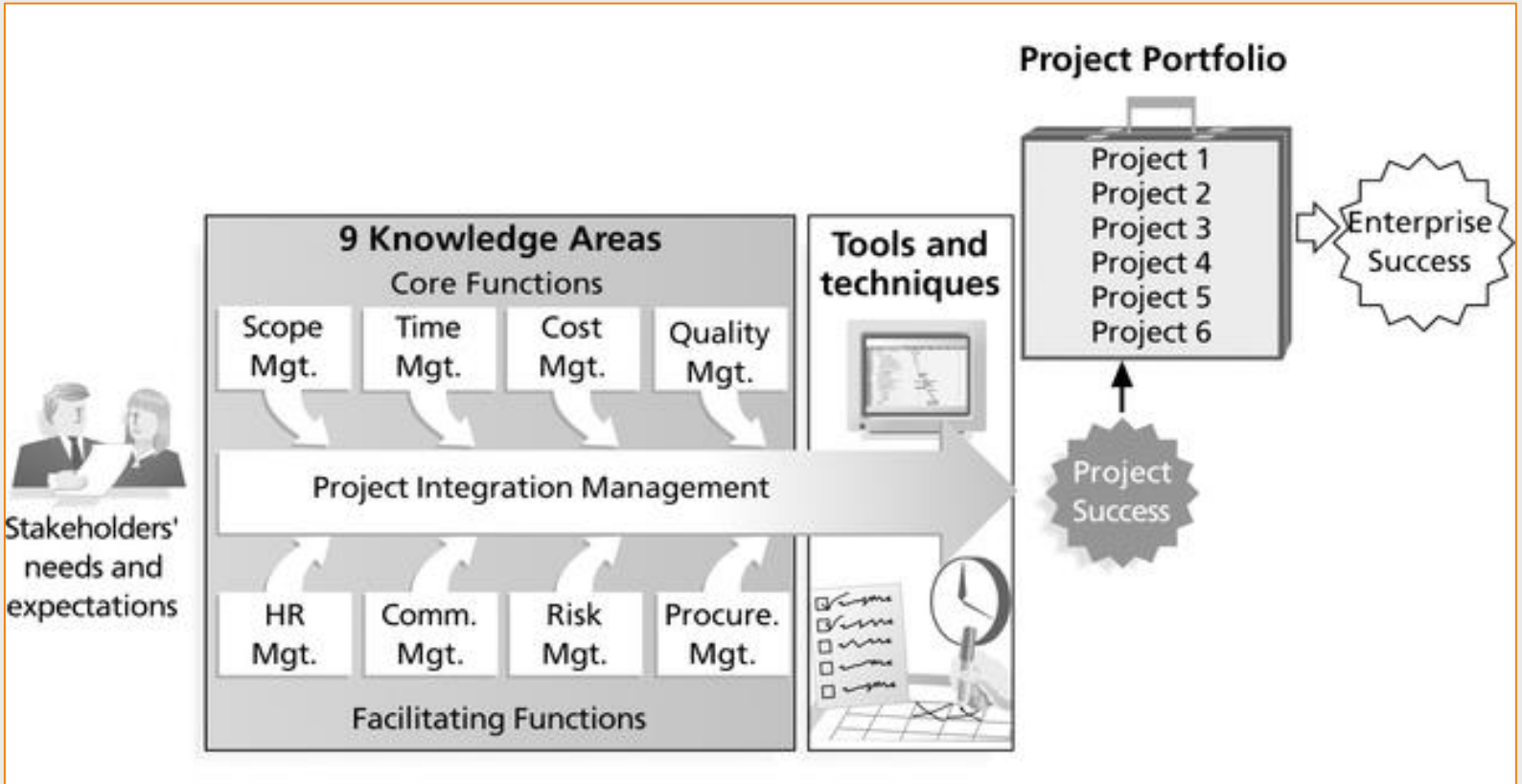
- Important to have a series of steps
- Adaptable Framework
- Roles to fill

Project Management Framework

9 Key Knowledge Areas

- Integration Management
- Scope Management
- Time Management
- Cost Management
- Quality Management
- Human Resource Management
- Communications Management
- Risk Management
- Procurement Management

Project Management Framework



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Project Management Framework

Project Integration

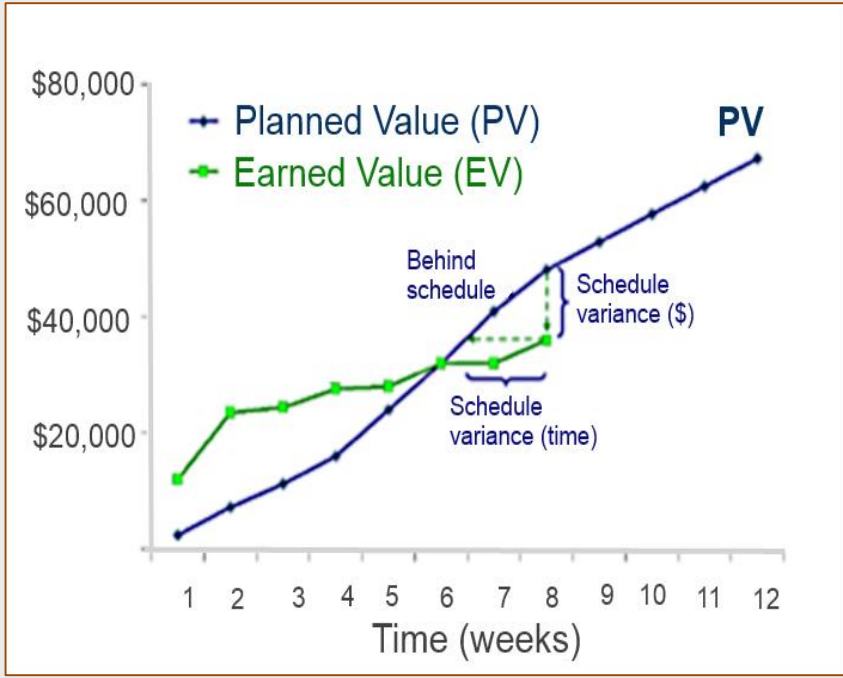
- ensures that the various elements of the project are properly coordinated.
- integration involves making tradeoffs among competing objectives and alternatives to meet stake-holder needs.

Earned Value Management (EVM)

One of the techniques used to both integrate the various processes and to measure the performance of the project as it moves from initiation through to completion.

Earned value is the amount of work completed, measured according to the budgeted effort that the work was supposed to consume.

Also called the budgeted cost of work performed.



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Project Management Framework

Project Scope Management

- Includes all of the work required
- Only the work required
- Tools and processes defined in the Project Life Cycle

Project Management Framework

Project Time Management

Activity Definition – Identify activities that must be performed

Activity Sequencing – Identify interactivity dependencies.

Activity Duration Estimating - Estimate the work periods that will be needed to complete individual activities.

Schedule Development - Analyze activity sequences, activity durations, and resource requirements

Schedule Control - Control changes to the project schedule

Project Management Framework

Project Cost Management

Resource Planning - Determine what resources should be used to perform project activities.

Cost Estimating - Develop an approximation (estimate) of the costs of the resources needed to complete project activities.

Cost Budgeting - Allocate the overall cost estimate to individual work activities.

Cost Control - Control changes to the project budget.

Project Management Framework

Project Quality Management

- Satisfy the needs for which it was undertaken
- Quality of the project & quality of the product

Project Management Framework

Project Human Resource Management

- **Organizational Planning** - Identify, and assign project roles, responsibilities
- **Staff Acquisition** - Get the people needed assigned to and working on the project.
- **Team Development** - Develop individual and group competencies to enhance project performance

Project Management Framework

Project Communication Management

Communications Planning - Determine the information and communications needs of the stakeholders.

Information Distribution - Make needed information available to project stakeholders in a timely manner.

Performance Reporting - Collect and disseminate performance information. This includes status reporting, progress measurement, and forecasting.

Administrative Closure--generating, gathering, and disseminating information to formalize a phase or project completion.

Project Management Framework

Project Risk Management

Risk Management Planning – Decide how to approach and plan the risk management

Risk Identification - Determine which risks might affect the project

Qualitative Risk Analysis - Qualitative analysis to prioritize their effects

Quantitative Risk Analysis - Measure the probability and consequences

Risk Response Planning - Develop procedures to the project's objectives.

Risk Monitoring and Control - Monitor residual risks, identify new risks, execute risk reduction plans

Project Management Framework

Project Procurement Management

Procurement Planning - Determine what to procure and when.

Solicitation Planning - Obtain quotations, bids, offers, or proposals, as appropriate as well as, document product requirements and identify potential sources.

Source Selection - Chose from among potential sellers.

Contract Administration - Manage the relationship with the seller.

Contract Closeout - Completion and settlement of the contract, including resolution of any open items or disputes

Project Constraints

All projects are limited by their product and process quality requirements.

- Cost – mostly labor costs but also hardware and software, training, etc.
- Time – delivery schedule
- Resource Availability – people (skills), facilities and equipment, etc.

In reality, we can only manage at most two of the constraints.

We have to decide which of these constraints can tolerate flexibility.

The Creeps

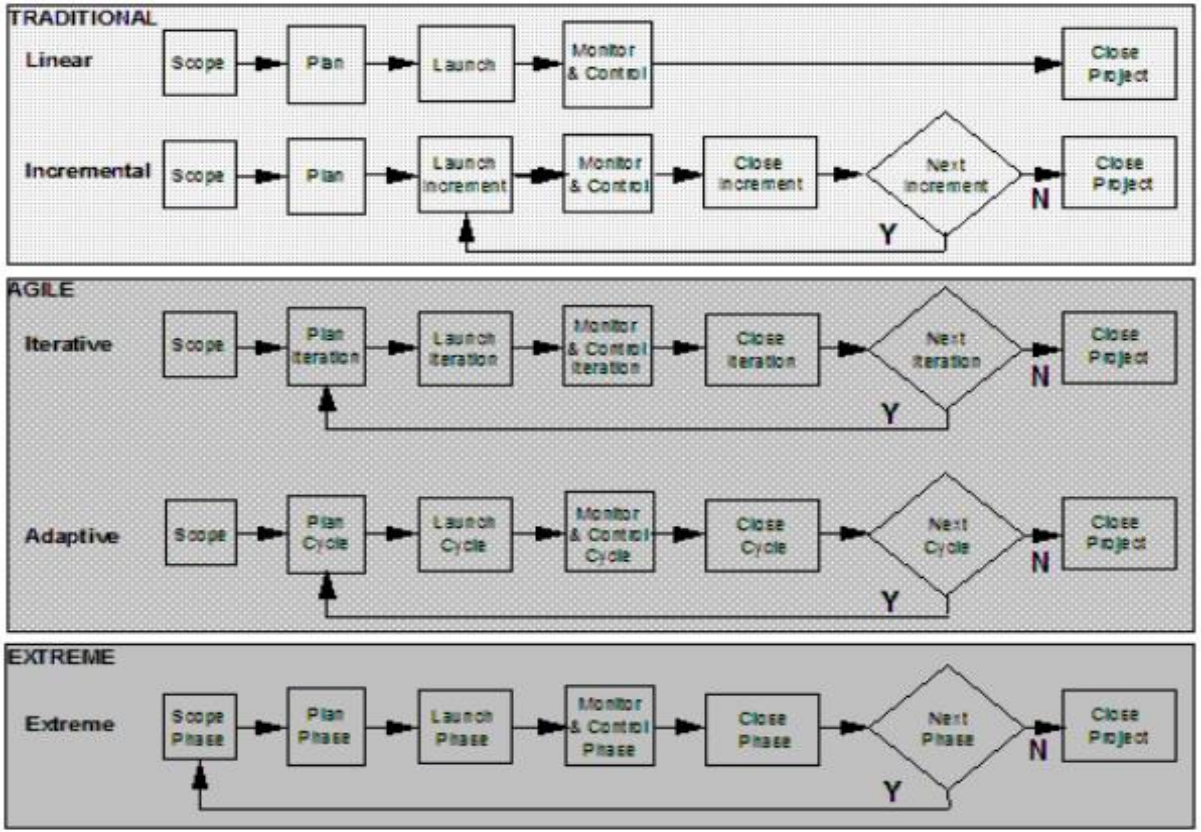
Projects tend to grow in unexpected ways – this is called creep.

There are three types of creep

- Scope – additional requirements added
- Hope – development team is falling behind but hides it
- Effort – team member is putting in the effort but not completing by the deadline

Types of Project Management

- Traditional
- Iterative Planning
- Adaptive Planning
- Extreme Planning



Summary

In this chapter we covered, at a very high level, the concepts of project management.

We looked at the 9 key areas of project management, the current management styles, as well as reviewed the creeps.

Successful software projects occur with successful management of time, money and resources.

Chapter Assessment

1. The Cost of Quality often refers to the costs to ensure a product or service conforms to specific quality standards. Which of the following is not a cost associated with the Cost of Quality?

A – Appraisal Cost
B – Defect Cost
C – Failure Cost
D – Prevention Cost

Chapter Assessment

2. What option is true about the Project Scope Statement?

A – It includes a system for identifying, assessing, evaluating and responding to risks.
B – It describes how the project team will take the work breakdown structure and identify activities from the work packages.
C – It includes a system which allows for the management of changes to scope.
D – It takes details from the Initiation and Planning processes, progressively elaborating on them in more detail so that future management decisions can be made based on its content.

Chapter Assessment

3. While examining project documentation for a project you have just taken over, you notice that not all the stakeholders were consulted and the project scope statement appears to be incomplete. Which process should you revisit and why?

A – Identify stakeholders as not all the stakeholders were originally identified.
B – Define scope as the Project Scope Statement does not contain acceptance criteria and the project team will not be able to carry out user acceptance testing on the final product.
C – Define scope because not all the tools and techniques for this process were used.
D – Collect requirements because the needs and expectations of all the stakeholders were not taken into account previously

Chapter Assessment

4. When examining the project documentation for a project you have just been assigned, you notice that the previous PM for this project had not included sufficiently detailed time estimates in the schedule. What would you do immediately?

A – Discuss this with your project team to solicit their opinions.
B – Use your expert judgment to incorporate extra detail on pessimistic, optimistic, and most likely durations.
C – Talk to stakeholders to revisit their requirements, as it is obvious the previous PM did not fully understand them.
D – Explain the situation to the Project Sponsor and ask for guidance.

Chapter Assessment

5. You are the project manager at a manufacturer of electronic components. Your company had been a long time market leader in electronic components distribution industry. In recent years, the Internet has transformed the competitive landscape.

As a result your company's market share has been eroding. Hence, your current project involves implementing the company's internet strategies to best exploit these altered dynamics and increase the company's market share. You are in the project planning process, and are personally estimating the time needed for each activity.

Once you've created the overall project estimate, you commit to completing the project deliverables to this date. Which of the following BEST explains why this is NOT the right way to estimate the schedule?

A – The estimates should have come from the project team members.
B – The estimate should have accounted for the market dynamics and timing requirements.
C – The project sponsor should have been actively involved in producing the estimates.
D – The estimates should have been created by management.

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