

SPM UNIT V

Project Organizations and Responsibilities: Line-of-Business Organizations, Project Organizations, and Evolution of Organizations.

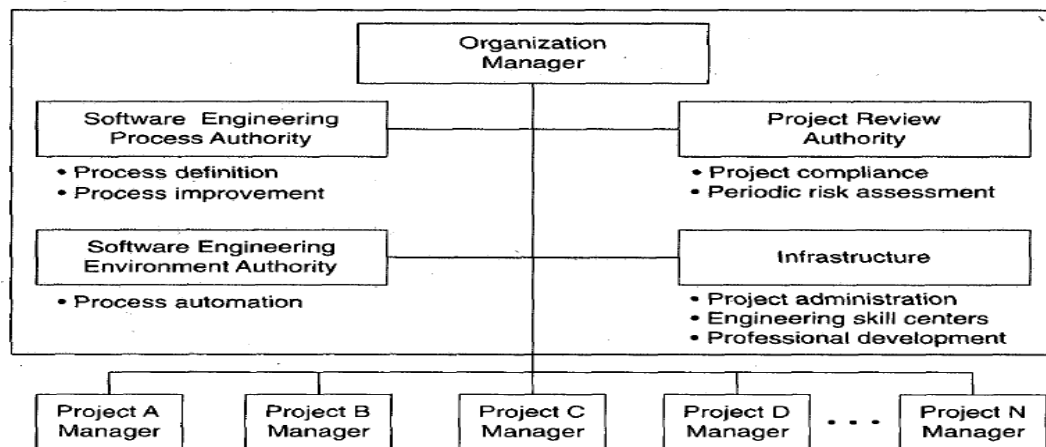
Software lines of business and project teams have different motivations. Software lines of business are motivated by return on investment, new business discriminators, market diversification and profitability.

Software professionals in both types of organizations are motivated by career growth, job satisfaction and the opportunity to make a difference.

LINE -OF-BUSINESS ORGANIZATIONS

The main features of the default organization are as follows:

- Responsibility for process definition and maintenance is specific to a cohesive line of business.
- Responsibility for process automation is an organizational role and is equal in importance to the process definition role.
- Organization roles may be fulfilled by a single individual or several different teams, depending on the scale of the organization.



Default roles in a software line-of-business organization

The line of business organization consists of 4 component teams.

Software Engineering Process Authority (SEPA):

- ❖ Responsible for exchanging the information and project guidance to or from the project practitioners.
- ❖ Maintains current assessment of organization process maturity.
- ❖ Help in initiate and periodically assess project processes.
- ❖ Responsible for process definition and maintenance.

Project Review Authority (PRA):

- ❖ Responsible for reviewing the financial performance, customer commitments, risks & accomplishments, adherence to organizational policies by customer etc.
- ❖ Reviews both project's conformance, customer commitments as well as organizational policies, deliverables, financial performances and other risks.

Software Engineering Environment Authority (SEEA):

- ❖ SEEA deals with the maintenance or organizations standard environment, training projects and process automation.
- ❖ Maintains organization's standard environment.
- ❖ Training projects to use environment.
- ❖ Maintain organization wide resources support.

Infrastructure:

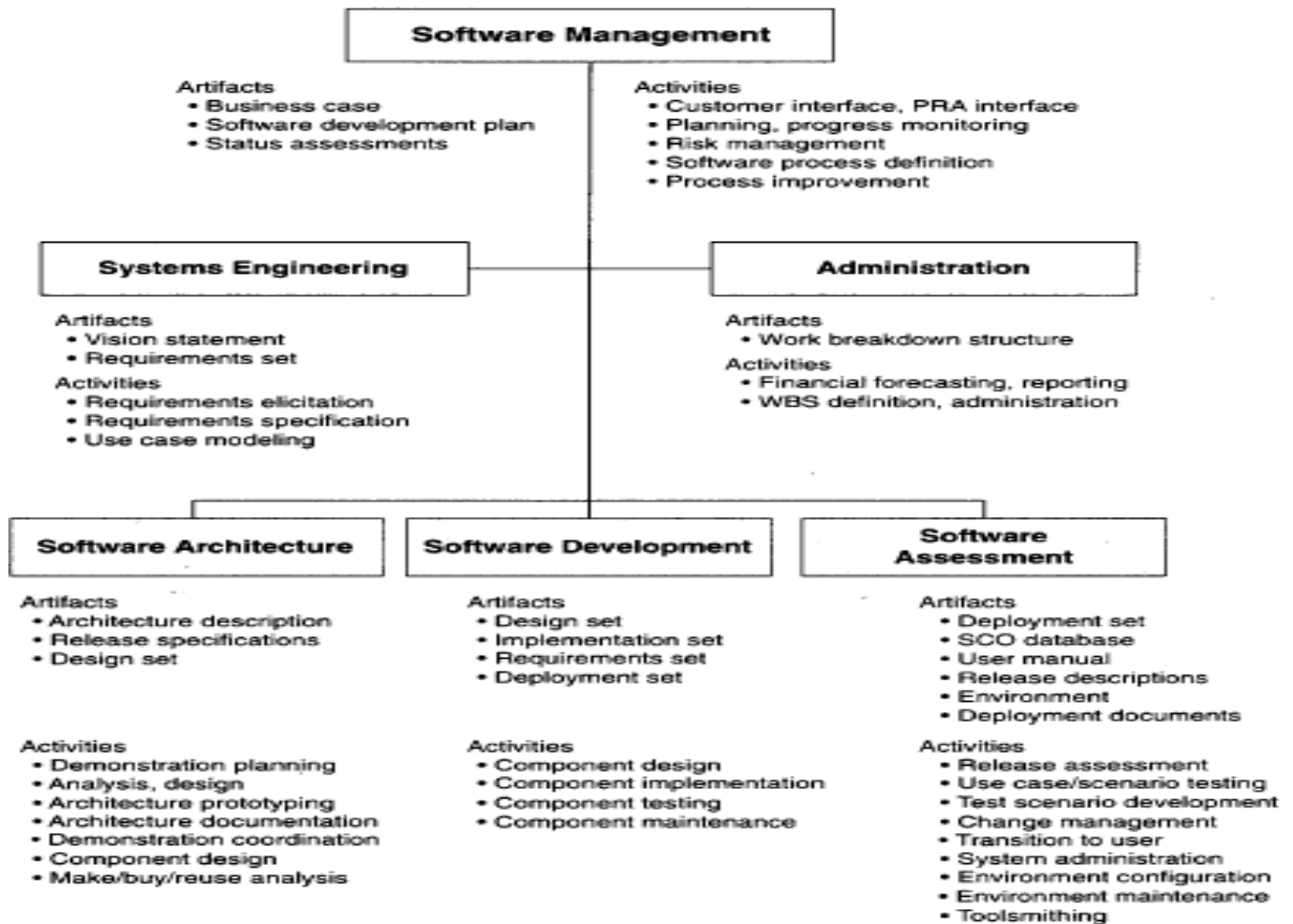
- ❖ An organization's infrastructure provides human resources support, project-independent research and development other capital software engineering assets. The typical components of the organizational infrastructure are as follows:
 - ❑ **Project Administration:** Time accounting system; contracts, pricing, terms and conditions; corporate information systems integration.
 - ❑ **Engineering Skill Centers:** Custom tools repository and maintenance, bid and proposal support, independent research and development.
 - ❑ **Professional Development:** Internal training boot camp, personnel recruiting, personnel skills database maintenance, literature and assets library, technical publications.

PROJECT ORGANIZATIONS

The default project organization and maps project-level roles and responsibilities. This structure can be tailored to the size and circumstance of the specific project organization.

The main feature of the default organization is as follows:

- ❑ *The project management team* is an active participant, responsible for producing as well as managing. Project management is not a spectator sport.
- ❑ *The architecture team* is responsible for real artifacts and for the integration of components, not just for staff functions.
- ❑ *The development team* owns the component construction and maintenance activities.
- ❑ *Quality is every one job. Each team takes responsibility for a different quality perspective.*



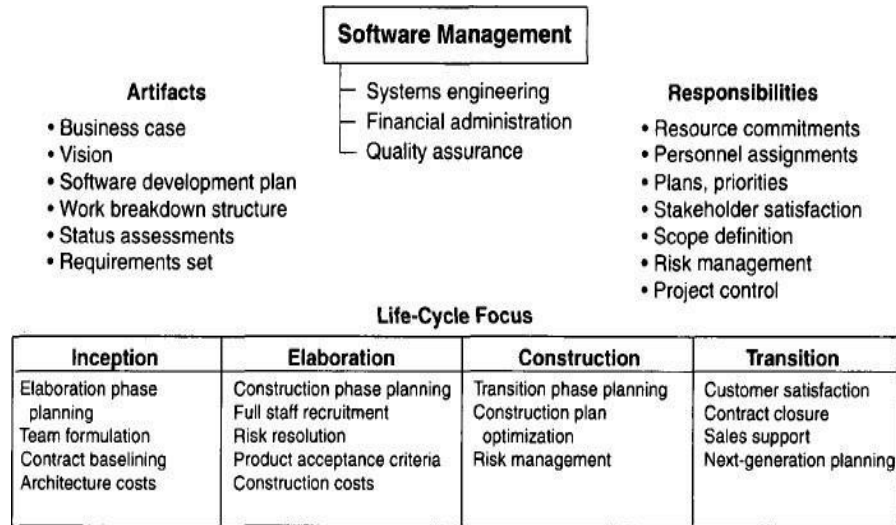
Default project organization and responsibilities

Software Management Team:

- ❑ This is active participant in an organization and is incharge of producing as well as managing.
- ❑ As the software attributes, such as Schedules, costs, functionality and quality are interrelated to each other, negotiation among multiple stakeholders is required and these are carried out by the software management team. _

Responsibilities:

- ❖ Effort planning
- ❖ Conducting the plan
- ❖ Adapting the plan according to the changes in requirements and design
- ❖ Resource management
- ❖ Stakeholders satisfaction
- ❖ Risk management
- ❖ Assignment or personnel
- ❖ Project controls and scope definition
- ❖ Quality assurance



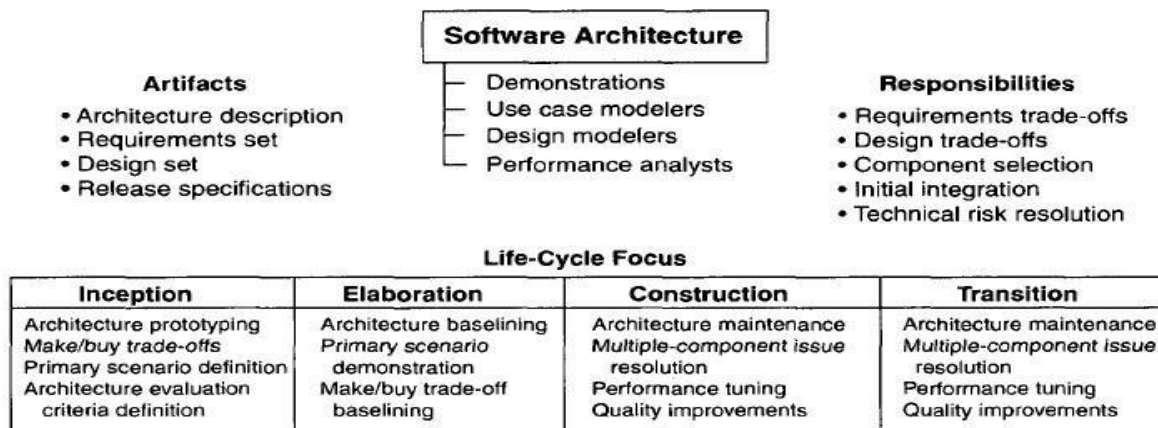
Software management team activities

Software Architecture Team:

- ☐ The software architecture team performs the tasks of integrating the components, creating real artifacts etc.
- ☐ It promotes team communications and implements the applications with a system-wide quality.
- ☐ The success of the development team is depends on the effectiveness of the architecture team along with the software management team controls the inception and elaboration phases of a life-cycle.
- ☐ The architecture team must have:
 - ❖ Domain experience to generate an acceptable design and use-caseview.
 - ❖ Software technology experience to generate an acceptable process view, component and development views.

Responsibilities:

- ❖ System-level quality i.e., performance, reliability and maintainability.
- ❖ Requirements and design trade-offs.
- ❖ Component selection
- ❖ Technical risk solution
- ❖ Initial integration



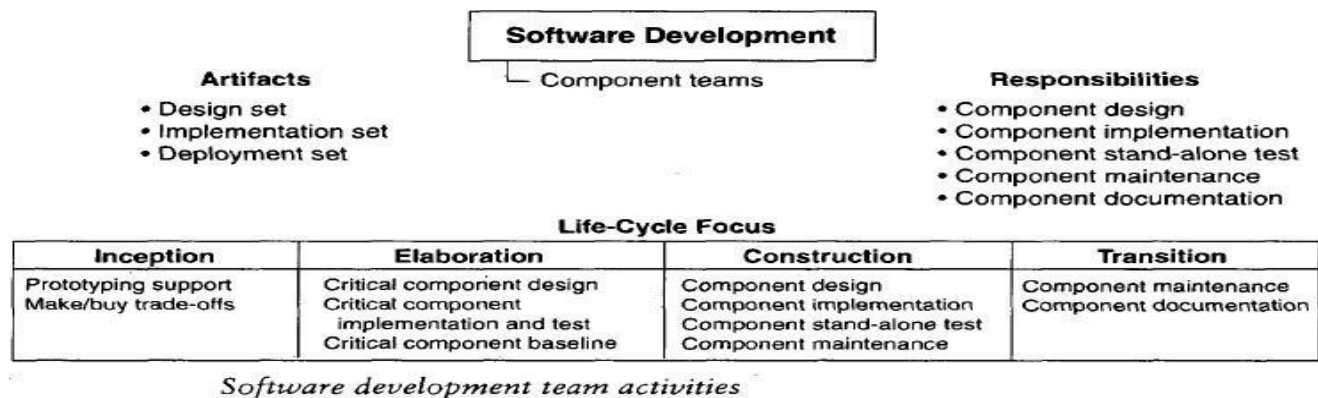
Software architecture team activities

Software Development Team:

- ❑ The Development team is involved in the construction and maintenance activities. It is most applicationspecific team. It consists of several sub teams assigned to the groups of components requiring a common skill set.
- ❑ The skill set include the following:
 - ❖ **Commercial component:** specialists with detailed knowledge of commercial components central to a system's architecture.
 - ❖ **Database:** specialists with experience in the organization, storage, and retrieval of data.
 - ❖ **Graphical user interfaces:** specialists with experience in the display organization; data presentation, and user interaction.
 - ❖ **Operating systems and networking:** specialists with experience in various control issues arises due to synchronization, resource sharing, reconfiguration, inter object communications, name space management etc.
 - ❖ **Domain applications:** Specialists with experience in the algorithms, application processing, or business rules specific to the system.

Responsibilities:

- ❑ The exposure of the quality issues that affect the customer's expectations.
- ❑ Metric analysis.
- ❑ Verifying the requirements.
- ❑ Independent testing.
- ❑ Configuration control and user development.
- ❑ Building project infrastructure.

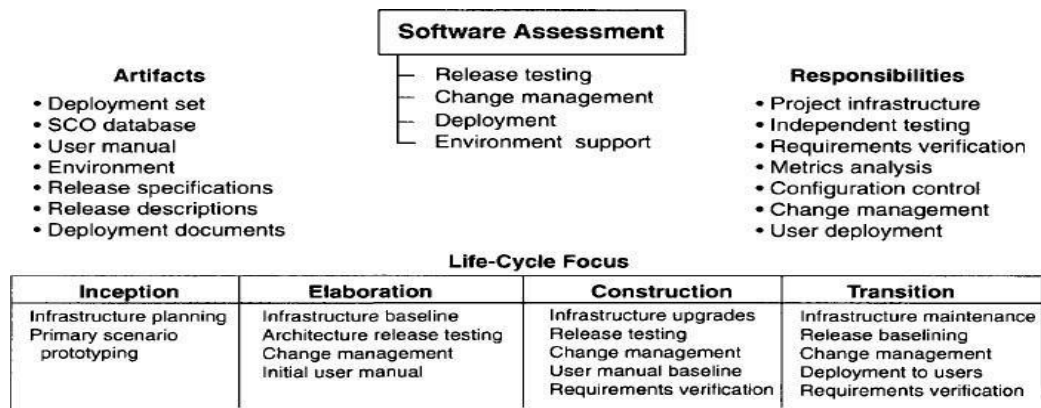


Software Assessment Team:

- ❑ This team is involved in testing and product activities in parallel with the ongoing development.
- ❑ It is an independent team for utilizing the concurrency of activities.
- ❑ The use-case oriented and capability-based testing of a process is done by using two artifacts:
 - ❖ Release specification (the plan and evaluation criteria for a release)
 - ❖ Release description (the results of a release)

Responsibilities:

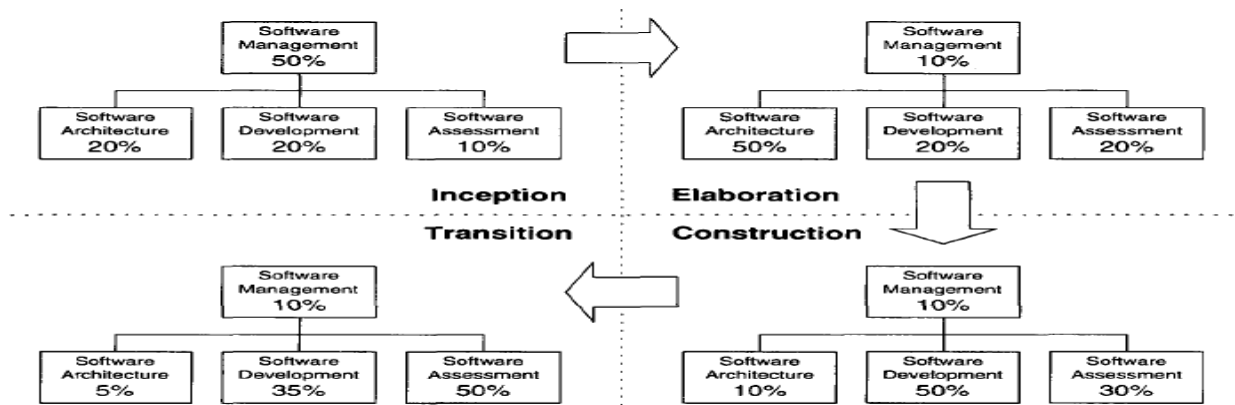
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Software assessment team activities

EVOLUTION OF ORGANIZATIONS

- ❑ The project organization represents the architecture of the team and needs to evolve consistent with the project plan captured in the work breakdown structure.
- ❑ A different set of activities is emphasized in each phase, as follows:
 - ❖ **Inception team:** An organization focused on planning, with enough support from the other teams to ensure that the plans represent a consensus of all perspectives.
 - ❖ **Elaboration team:** An architecture-focused organization in which the driving forces of the project reside in the software architecture team and are supported, by the software development and software assessment teams as necessary to achieve a stable architecture baseline.
 - ❖ **Construction team:** A fairly balanced organization in which most of the activity resides in the software development and software assessment teams.
 - ❖ **Transition team:** A customer-focused organization in which usage feedback drives the deployment activities



Software project team evolution over the life cycle