Systems Development Life Cycle

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Description: A Systems Development Life Cycle is a methodology that defines the steps necessary to successfully conduct a software development project. The methodology may be an established product (e.g. Rational Unified Process) or developed in house, and should accommodate projects of all sizes, including both applications development and infrastructure projects. Further, the adopted methodology should be able to accommodate the need for rapid deployment projects. The key elements of an SDLC include:
1. Discrete phases with "go/no go" criteria
2. Formal reviews at critical phases (e.g. Design Review)
3. Role and responsibility definition of all participants
4. Communication structure (meetings, reports, etc.)

Benefits: Experience has taught us that no software development project should start without a well defined SDLC methodology in place. Following the methodology ensures that appropriate phase reviews occur, that roles and responsibilities are clearly defined, and that expectations can be managed in a structured way. Typically, the SDLC will be closely aligned with the general Project Management methodology within your organization. If your organization has a methodology, ensure that it is followed. If you do not, institute one immediately.

First Steps: If your organization has no documented SDLC take the following steps:
1. Convene a team of senior technical/management staff from your development group
2. Charge them with defining/acquiring an SDLC based on a set of specific requirements for your development team (e.g. if you develop code only in Java, then an SDCL that uniquely tailored to Java is appropriate; alternatively, if you typically implement packages and discourage native code generation, then other tools would be a better fit)
3. Develop a project plan for the implementation of the selected SDLC, starting with a single development project and expanding to all future projects

Example: Figure 1 provides a high level overview of a five-phase SDLC that can be implemented quickly. This model was implemented in a small company within one month. Note that phase deliverables are illustrative rather than comprehensive.

Systems Development Life Cycle

	Project Approved	Transition To Eng.	Building Begins	Go-Live	

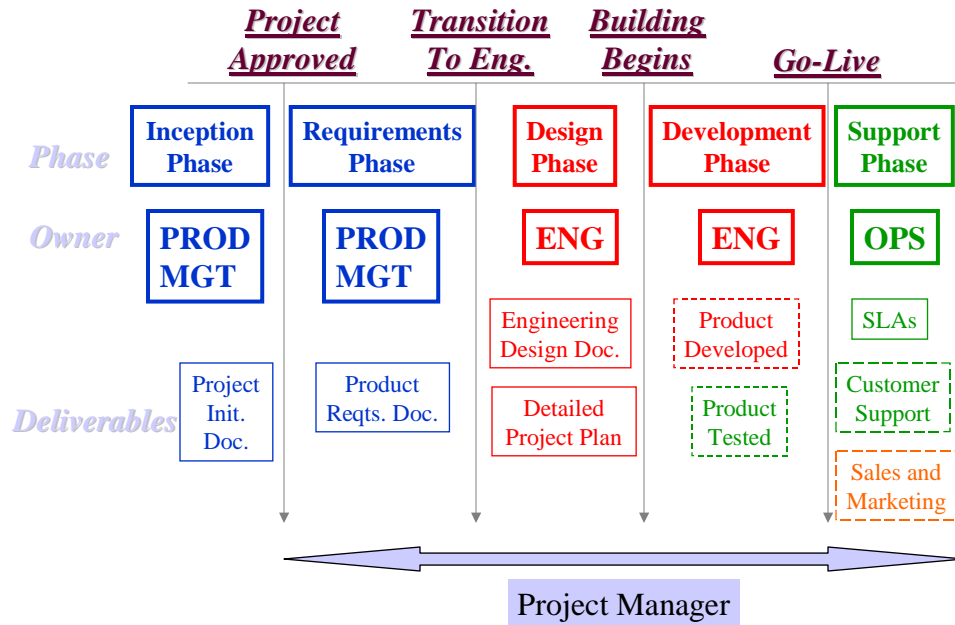| Phase	Inception Phase	Requirements Phase	Design Phase	Development Phase	Support Phase
Owner	PROD MGT	PROD MGT	ENG	ENG	OPS
Deliverables	Project Init. Doc.	Product Reqts. Doc.	Engineering Design Doc. / Detailed Project Plan	Product Developed / Product Tested	SLAs / Customer Support / Sales and Marketing

Project Manager

Figure 1 – System Development Life Cycle Overview