Lifecycle Model Selection

Lifecycle model selection is the practice of evaluating the specific needs and challenges of a project and then choosing the most appropriate model for the development process. Lifecycle selection helps ensure the development is its most efficient and effective.

Main Benefits	Enables development efficiency by ensuring the tasks and task ordering are well suited to the needs and challenges of a particular project.
Keys to Success	Selecting the appropriate lifecycle based on the needs of the project.
When to Use	Lifecycle model selection should be used on all projects.
Main Risks	Lifecycle model selection contains no inherent risks, however the model selected may contain additional risks.

Overview

A software lifecycle is a model that describes all of the activities that go into creating a software product. Product development styles vary tremendously among different kinds of projects, requiring different kinds of tasks and different task orderings.

Choice of the wrong lifecycle model can result in missing tasks and inappropriate task ordering, which undercuts project planning and efficiency. Choice of an appropriate lifecycle model has the opposite effect—ensuring that all effort is used efficiently.

To choose the most effective lifecycle model for your project, examine your project and answer the following questions:

- How well do my customer and I understand the requirements at the beginning of the project? Is our understanding likely to change significantly as we move through the project?

- How well do I understand the system architecture? Am I likely to need to make major, architectural changes mid-way through the project?

- How much reliability do I need?

- How much do I need to plan ahead and design ahead during this project for future versions?

- How much risk does this project entail?

- Am I constrained to a predefined schedule?

- Do I need to be able to make mid-course corrections?

- Do I need to provide my customers with visible progress throughout the project?

- Do I need to provide management with visible progress throughout the project?

- How much sophistication do I need to use this lifecycle model successfully?

CxOne Support

CxOne provides support for selecting of the most appropriate lifecycle for your project through the *lifecycle* and *project planning* materials. The lifecycle best practices describe when each lifecycle is most efficient. The project plan checklist, template, and guide provide a mechanism for selecting or defining the most suitable lifecycle.

Interactions with other Best Practices

Lifecycle selection itself does not interaction with other best practices. However, the lifecycle selected can help a project understand which best practices will improve efficiency and effectiveness.

Further Reading

McConnell, Steve. *Rapid Development*. Redmond WA: Microsoft Press. 1996.

DeGrace, Peter and Leslie Hulet Stahl. *Wicked Problems, Righteous Solutions*, Englewood Cliffs, New Jersey: Yourdon Press, 1990.

Boehm, Barry W., ed. *Software Risk Management*. Washington, DC: IEEE Computer Society Press, 1989.

Jones, Capers. *Assessment and Control of Software Risks*. Englewood Cliffs, N.J.: Yourdon Press, 1994.