

SECTION 2 – THRESHOLD CRITERIA

DENR has adopted a departmental System Development Life Cycle (SDLC) Methodology . This methodology should be used to provide guidance when developing or modifying department application systems. The SDLC is comprised of three alternative “paths” or, in IEEE terminology, software life cycle models (SLCM). The first is a full-scale life cycle model that applies to large, complex, and/or “risky” application development projects. The second refers to small, relatively simple projects, and the third applies to small projects that can be developed using a Rapid Application Development (RAD) approach. Below are threshold criteria to be used to distinguish between the large, risky projects and the other, small projects.

A. Threshold Criteria

If you believe that your project will exceed any of the threshold criteria please fill out the associated form, and e-mail the form to the ITS Director. His e-mail address is linked to the form. You may be asked to meet with the Director or the System Development Team Chief to discuss your project. Again, the purpose of this meeting and of the SDLC is provide assistance, such that your project comes in on time, within budget, and provides the functionality that you desire.

Size of the Development Team

On medium to large projects, communication among team members to share information, coordinate work, and communicate decisions takes up a great deal of time. A smaller team has less difficulty communicating simply because there are fewer people communicating. The extreme case is a single-person project, with no communication overhead at all. A smaller team also needs less formalized documentation of decisions reached. Some record must be maintained, but it can usually be much less detailed than for a larger team. There are fewer project standards, especially in the administrative area. The project management structure can be greatly simplified.

Project team threshold criteria: For a major project the project team would be expected to equal or exceed five people (the average staffing level over the course of the project.)

Level of Risk

Five central criteria may contribute to project failure and constitute the proposed application’s level of risk. These include: 1) the level of disruption to operations associated with a project failure, 2) the potential loss of funds used to develop the application, 3) the level of project visibility and notoriety, 4) presence of technical innovation, and 5) business process change.

°Potential disruption criteria: For a major project, the risk for material operational disruption due project failure is high

°Funds-at-risk criteria: For a major project, the anticipated application is expected to cost \$250,000 or more.

°Level of visibility criteria: For a major project, a project failure is expected to be noted by the press or to be of material interest to legislators or public interest groups.

°Technical innovation criteria: For a major project, neither the development nor execution architectures are in place; considerable innovation in system software or technical architecture is expected.

°Business process criteria: For a major project, the business process is being redesigned.

B. SDLC-Threshold Questions

Please respond to these questions and e-mail your response to the ITS Director if you expect your project to meet any of the criteria above.

1. How many fte's do you anticipate will be required to staff the development team for this project? (This number would represent the average team size over the life of the project.)
2. Would you expect failure to develop this project on time with expected functionality to disrupt your operations? How?
3. How much do you expect this application will cost to develop? If you have an estimate of the cost associated with ongoing maintenance of this application, what is your estimate?
4. Would you expect any legislative, executive, or public (e.g. the newspaper) scrutiny of this project or of project failure should that occur? Who would have an interest and why? What kind of response would you anticipate should the project fail?
5. Is the hardware and software that you expect to use to develop and operate this application in place and well-known by members of your development team? Do you anticipate any programming or system integration solutions for this application that would require a "proof of concept"?
6. Do you anticipate any material business process redesign associated with the development and implementation of this application?

End of Section 2