

CSS 506 – Class Project – Feasibility Analysis

Introduction

A key aspect of any successful project is understanding stakeholder needs. In software development, the analysis phase whether using formal requirements engineering as part of a prescriptive approach or working directly with stakeholders on an incremental basis as part of an agile approach.

For the class project, we are at the inception phase which has high risk because of the unknowns. Almost all SDLCs (including agile) suggest a methodological approach should be taken to determining project feasibility and eliciting requirements.

Feasibility

Project feasibility is about addressing major risk leading catastrophic failure of effort. Project feasibility considers internal and external factors to analysis and identify overall project risk, suggest methods to mitigate unknowns, make a "go" / "no go" recommendation of the project. Project feasibility is based on:

- technical feasibility -- can we actually create the software system?
- economic feasibility -- can we afford the software system -- development, infrastructure, and ongoing costs:?
- operational feasibility -- can the system operate within the organizational constraints and processes
- team and project feasibility -- do we have skills, tools, and resources (including people) to create / maintain the system?
- legal / regulatory feasibility -- will the developing or operating the system create liabilities?
- and others

For the Class Project, can you determine project feasibility "as is" (based on current information)? If not what methods do you suggest to get to the point on making that "go" / "no go" recommendation? Feasibility should be addressed as part of your project plan.

Bootstrapping Requirements

After feasibility, we need to begin to identify the details of the system -- what are we expected to develop? Software developers during this analysis phase need to interact with stakeholders to elicit and validate project requirements. From a tactical sense, we can use a variety of different elicitation methods such:

- Review of existing systems including documents, papers, forms, reports, process flow
- Formal ("focus groups") and informal interviews

- Surveys and questionnaires
- Mock-ups and prototypes
- Formal ("usability studies") and informal observation
- Joint application development (JAD) and JAD sessions
- Group synergy such as brainstorming sessions, fish-bone analysis, etc.
- Ethnography
- Viewpoint Analysis

The benefits and costs associated with each different method should be considered along with the expected value of the method in providing real requirements for this type of project. Our understanding of these factors should be part of the justification for the overall project plan.

For the Class Project, you need to develop how to get through inception and early elaboration for the project. What is your proposal for efficiently gathering, validating, and managing the requirements of the project?

Also, remember that the Kano model and "blue ocean" thinking can raise the overall impact and value the project can have.

Last, we need to determine the form and expression of artifacts which may or may not be defined by the SDLC approach and how they will be managed to drive project development but avoid