Risks to Systems Development Projects

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Research on the success and failure rates of system development projects, date back to 1994 with the initial studies by the Standish Group showing terrible results. With some improvements by 2000, the success rate of system development projects was still low at 28% with 72% cancelled projects or completed late, over budget, or with limited functionality (Satzinger, Jackson, & Burd, 2006).

A crucial element to attaining success involved the step that occurs during the planning phase, in which the system development team tries to identify project risks and confirms project feasibility. As described in our course textbook, the authors say, “We believe that good project management requires both: a careful look at the overall feasibility of the project and at the individual risks (Satzinger, Jackson, & Burd, 2006) (page 99).” They go on to say, “the best way to identify risks is simply to have a brainstorming session.” When confirming a project’s feasibility, there is a need to perform activities to determine the following aspects: organizational feasibility, cultural feasibility, technological feasibility, schedule feasibility, resource feasibility, and economic feasibility (Satzinger, Jackson, & Burd, 2006).

Companies expend a significant amount of time, effort and capital in the development of new information systems. Though systems development (SD) can vary in complexity and size, there have been an alarming occurrence of setbacks and failures to complete the projects. Surveys and records show that an estimated 50-80% of projects fail to achieve their objectives (Warkentin, Moore, Bekkering, & Johnston, 2009). Their research looks at the many risk factors associated with system development failure, which have traditionally been categorized as technical, resource constraint, organizational, and “other” risk. Then they looked at the interactions between the risk factors and they developed a framework. From this framework they developed an open-ended survey for an inter-industry, group of experienced systems development engineers and project managers. The majority experienced professionals surveyed, had a holistic viewpoint of the risks and perceived that all risk ultimately derives from organizationally-oriented factors; and thus, should be solved with organizational responses. As the researchers (Warkentin, Moore, Bekkering, & Johnston, 2009) stated, “there appears to be an interactive effect such that risk factors cannot be appropriately managed without maintaining a ‘bird's-eye’ view of the project, which inevitably requires an organizational perspective.”

This “holistic viewpoint with an organizational perspective” seems to be very much like information engineering approach. As described in our course textbook (Satzinger, Jackson, & Burd, 2006) (page 58), information engineering begins with an overall strategic plan to define all the information systems that the organization needs to conduct business. It provides a more complete life cycle support, through the use of an integrated tool for automation and enforcing rigid use by the analyst. The risks associated with system development can be reduced when the organization defines the business functions and activities that the systems need to support, the data entities that need to store information, and the technological infrastructure that the organization plans to use. As the project progresses, the activities and data are refined and focus is on the data and the process dependency diagram (Satzinger, Jackson, & Burd, 2006).

For decades, an unacceptably high proportion of Information System (IS) investments end in failure; which wastes billions of dollars annually and missed opportunities probably cost a great deal more. Traditionally, failure in system development is derived from focusing on only “the timely delivery of a technical artefact.” Other research suggest that the success of a systems development project should be measured in terms of its ability to deliver meaningful benefits and therefore organizations should adopt an explicit and proactive benefits realization approach when investing in IT. Consequently, while the successful delivery of a new piece of software might be seen as an important milestone, it should not be viewed as the primary objective of a new IS project (Doherty, Ashurst, & Peppard, 2012).

**Thesis Peer Review**

This thesis paper was reviewed by a peer. The review was acknowledged with the following comment: Soohoon Lee (fellow student and team member) wrote, “I agree with paper. I saw couple of cases that company spends tremendous amount of money and time on projects and ended up failing. Most of the cases it is because of not-well-organized project planning. According to my experience, project usually goes to wrong direction, then team has to make up something or find alternative way to reach to goal, or in worst case, project fails and get trashed. Hope this helps.”

# References

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