

Value-Driven IT Project Portfolio Management: Tool-Based Scoring, Selection, and Scheduling

ABSTRACT

Managing IT project portfolios is a challenge because of IT projects' complexity, dynamics, and uncertainty. Many IT projects exceed resources or time frames and do not reach their value-driven goals. A continuous scoring, selection, and scheduling of IT project proposals is thus essential to build an optimal portfolio. It has a significant impact on value contribution, strategic direction, goal achievement, and competitive advantages. We quantify an IT project's urgency, strategy, efficiency, risk, and complexity as important evaluation and scoring criteria. To support top management decision makers in the IT project portfolio management process, we outline a combination of an evaluation approach with an optimization model. We develop a prototype decision support system to automate and simplify this process and demonstrate its applicability. Our recommendations address both theory and practice, improve IT project portfolio management, support value creation, and goal achievement.

Keywords

IT Project Portfolio Management, IT Project Selection and Scheduling, IT Project Scoring, Decision Support System, Design Science Research