

Performance Management of Tangible Assets within the Balanced Scorecard and Interactive Business Decision Tools

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Abstract : The present study investigated approaches and techniques to enhance strategic management governance and decision making within the framework of a performance-based balanced scorecard. The review of best practices from strategic, program, process, and systems engineering management provided for a holistic approach toward effective outcome-based capability management. One technique, based on factorial experimental design methods, was used to develop an empirical model. This model predicted the degree of capability effectiveness and is dependent on controlled system input variables and their weightings. These variables represent business performance measures, captured within a strategic balanced scorecard. The weighting of these measures enhances the ability to quantify causal relationships within balanced scorecard strategy maps. The focus in this study was on the performance of tangible assets within the scorecard rather than the traditional approach of assessing performance of intangible assets such as knowledge and technology. Tangible assets are represented in this study as physical systems, which may be thought of as being aboard a ship or within a production facility. The measures assigned to these systems include project funding for upgrades against demand, system certifications achieved against those required, preventive maintenance to corrective maintenance ratios, and material support personnel capacity against that required for supporting respective systems. The resultant scorecard is viewed as complimentary to the traditional balanced scorecard for program and performance management. The benefits from these scorecards are realized through the quantified state of operational capabilities or outcomes. These capabilities are also weighted in terms of priority for each distinct system measure and aggregated and visualized in terms of overall state of capabilities achieved. This study proposes the use of interactive controls within the scorecard as a technique to enhance development of alternative solutions in decision making. These interactive controls include those for assigning capability priorities and for adjusting system performance measures, thus providing for what-if scenarios and options in strategic decision-making. In this holistic approach to capability management, several cross functional processes were highlighted as relevant amongst the different management disciplines. In terms of assessing an organization's ability to adopt this approach, consideration was given to the P3M3 management maturity model.

Keywords : management, systems, performance, scorecard

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