

# COST BENEFIT ANALYSIS OF INFORMATION INTEGRITY

(Research Paper)

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**Abstract:** The paper studies a specific research query of developing an analytical method for comparing two integrity mechanisms. Towards this a generic business process is modeled as an integral to a closed loop information and control system. Competitive advantage requires informational work from this business process information system (*IS*) is maximized. This *IS* is a multiple stage decision process and involves at each stage information origination and processing activities that are impacted by system environmental factors. This makes the business process *IS* view a continuous individual information originating and processing situation characterized by uncertainty and, hence, information errors leading to loss of Information Integrity at each stage. This is a structural variant of a traditional collective decision process based view of *IS*. For maximization of informational work (i.e., *use*) and for integrity analysis, how is one then to model this *IS*? In response to this query the paper develops the information Usefulness-Usability-Integrity paradigm, which offers determinants of information value. Recognizing that information origination is a costly activity, the paper then suggests in the form of cost-benefit analysis of Information Integrity a methodology to compare two integrity mechanisms. This is followed by development of equations for calculation of value of information and of improvement in value of Information Integrity due to additional information.

**Key Words:** Open and Closed Systems, Informational Work, Decision Making, Information Origination, Uncertainty, Information Errors, Information Integrity, Usefulness-Usability-Integrity paradigm, Information Integrity Attributes, Information Integrity Risk, Value of Information, Improvement in Value of Information Integrity