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Managing Green IS - Integrating the Triple Bottom Line into the IS Value Chain: A Green IS assessment and decision framework

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ABSTRACT

We will provide a framework to examine decisions about sustainable, or “green,” IS solutions with multiple stakeholders and multiple factors. The framework explicitly integrates the triple bottom line and IS value chain perspectives. This enables a holistic assessment of the factors involved in the decision-making process, accounting for tangibles (e.g. cost savings from energy reduction) and important intangibles (e.g. social responsibility) as well as indirect factors (e.g. GHG reduction). In particular, a representative case study is presented that examines the specific issue of “greening a data center.” The framework is used to assess the various complex trade-off considerations for strategic options such as “replace existing servers with energy efficient servers” and “consolidate servers utilizing virtualization.” This leads to a decision process that accounts for both traditional business case (i.e. cost-profit analysis) and the sustainability business case. An example of green data centre is used to illustrate how the framework establishes the conditions and boundaries by which one strategy may be chosen over another, the sensitivities and accuracy needed of the required inputs, and the confidence in the resulting assessments and decisions.