Chapter 62
Green IT Project Management:
Optimizing the Value of Green IT Projects within Organizations

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ABSTRACT

With the constant evolution of technology and the world critical environmental status, all private and public Information Technology (IT) businesses are moving towards sustainability. Faced with influences from government regulations, market competition and constraints, as well as watchdogs, IT decision makers within organizations are forced to ride the green technology wave with a challenging and uncertain approach. This chapter defines methods to optimize Green IT projects for sustainable value creation within organizations. It only focuses on economic viability and environmental impact, but could be stretched out in the future to social aspects. The contributions of this chapter allow the project management community and decision makers to follow a framework for Green IT project success evaluation and performance follow-up throughout the project life cycle and the three levels of the organization: operational, tactical, and strategic. A macro-model is also developed to aid them in successfully selecting, prioritizing, managing, and aligning their Green IT projects with the corporate and environmental strategies.

INTRODUCTION

"Welcome to an exhausted world!" This slogan was used to welcome people attending one of the conferences on Green Information Technology (IT) during the "Microsoft Techdays 2010" in Paris. Faced to this apocalyptic view, the audience was intrigued on such a different approach to Green IT.

Most of Green IT conferences would start with the same cliché: the problematic environmental impact of technology reaching an equivalent of 2% of total worldwide CO_2 emissions, and the important role it could play to reduce the remaining 98%. Looking from a broader perspective, the threat is not limited to the climate change and the 293km^3 of ice lost each year from Greenland. It involves the whole planet's ecosystem from people's health and living trends to biodiversity, raw material and

energy resources availability and waste management. The humanity's problems are deeply rooted in its economic structure dictating individuals and organizations' behavior, in addition to the double-edged power of politics and lobbies.

Economy and Ecology: A Historical Misunderstanding

By going back to etymological roots, the economy is the science of managing resources within a living space. It "*deals with optimizing the production, distribution and consumption of goods and services within this space*" (Wordreference.com). Ecology, is the science of the living space, *it deals with studying the relation between organisms* (in this case, humans) and their environment. Here comes out the absurdity of the economic system, humans are living in. By overusing resources provided by nature at a very cheap price, they destroyed their key provider equilibrium. Two words with the same root were completely misaligned.

To illustrate this contradiction, consider the numerous times a basic consumer replaced a whole electronic device instead of trying to repair it. Maintenance services are very expensive while production is very cheap due to economies of scale. This cycle is being followed at the expense of more resources overuse, pollution, and hazardous wastes generation. Of course, such scenario is not always applicable; sometimes repair services can have a higher environmental footprint than simple replacement. The point is - does the current economic system allow space for evaluation?

Recent observations show signs of tangible change and evolution in the marketplace. Indeed, many business leaders agree that economy and ecology should be aligned, if not on the short term then at least on the long term. "*Green is Green*," declared General Electric CEO, Jeffrey Immelt, while advocating the cooperation between corporations and environmentalists (Coburn, 2008). In this greening wave, some business leaders seem only interested in green technologies from a financial perspective, the same way investors were carried by the Internet bubble in the 1990s. However, this cognitive change in the will to align economy and ecology is gaining popularity in organizations worldwide.

Integrating Sustainability in Organizations

Do businesses only exist to generate cash or do they have another role in the local, national, and even international society? Companies throughout the world are being asked to act responsibly not only on the environmental dimension but also on social aspects such as poverty, education and healthcare (Esty & Winston, 2006). Which comes first then, shareholder value or corporate social responsibility?

Neither! Sustainability is about finding the right balance between people, the planet, and the profit (3Ps). The will to align business and environmental sustainability is well illustrated in numerous environmental projects launched on the market, covering the fields of IT, construction, energy production, food industry, clothing, etc.

Why Should Organizations Consider Green IT?

In this changing trend, IT plays a double role. First, it is polluting, so it should be enhanced and re-engineered. Second, it represents a powerful tool that can be used to reduce the environmental impact of other products, operations, or businesses. As an enterprise or IT decision maker, one would be pressured by government regulations, incentives, or market competition, to start that kind of initiative. However, the challenge would be to optimize a selection from the myriad of solutions available on the market, align them with current projects, and evaluate the effective sustainability value created within the enterprise. Many projects are being implemented in this scope in IT departments by following standard processes for project

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