Chapter 3
Organizational IT Sustainability Measures:
The Strategic Green Ontology

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ABSTRACT

This chapter provides an overview of contemporary measures to improve environmental IT sustainability, and explains how to prioritize these measures. The question is not if, but how and when organizations should be addressing sustainability issues, due to expected growth in regulations and growth in stakeholder pressure. In mitigating these sustainability problems, the role of IT is ambiguous. IT is both part of the problem and part of the solution to the problem. This research explains how IT-related opportunities in organizations can support a sustainable environment, and how these relate to organizational goals.

INTRODUCTION: IT AND SUSTAINABILITY ISSUES

Sustainability is increasingly recognized as an important management subject. The realization that responsible IT usage is a sustainability issue is growing. An example of a threat to both organizational and human sustainability is the dependency on energy, depending on the primary activities of an organization's IT can take up to 50 percent of the total energy usage. (McKeefry, 2008). This describes one of the justifications for Green IT implementation, but also describes the need for environmental awareness. Green strategies provide companies with ways to be more climate friendly. There are multiple motivations for companies wanting to become more 'Green'. Bansal and Roth (2000) collected data that lead them to state that "firms were motivated largely by concerns for legitimacy, less by competitiveness, and even less by ecological responsibility". However, Porter & van der Linde (1995) already

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recognize that companies who actively pursue a green strategy, compared to only complying with regulations, can gain serious advantages in terms of costs because it forces them to innovate. They also state: "company mind-sets make the costs of addressing environmental regulations appear higher than they actually are" (Porter & van der Linde, 1995). The usage of IT plays an important role in companies nowadays, which means its role is ambiguous; IT as one of the causes of environmental problems and IT as part of the solution to solving environmental problems. The usage of IT is a big energy consumer, plus the production of IT components uses a lot of energy and environment unfriendly production and recycling methods. A recent study shows that CEOs find sustainability of great importance to the success of their organization, and more than 90% of the CEOs believe sustainability issues should be fully integrated into the strategy and operations of an organization (Accenture, 2010). More than 90% of CEOs state their organization will employ technology to address sustainability issues, leading to a clear business case for IT sustainability investments. The remainder of this chapter will investigate the following research question: *"How can IT-related opportunities in organizations support a sustainable environment and how can these be incorporated into organizational goals?"*

Justifying IT Sustainability Investments

It can be hard to justify investments in sustainability if it is unsure how and if these investments are going to be of help to an organization. Whatever the justifications for a corporate responsibility initiative within an organization are, if they cannot be related to the core strategy and operations of any specific organization -or the places in which it operates- its initiatives won't be successful (Esty & Winston, 2006; Porter & Kramer, 2006). An organization's strategy can be described as: "the direction and scope of an organization over the long-term: which achieves advantage for the organization through its configuration of resources within a challenging environment, to meet the needs of markets and to fulfill stakeholder expectations" (Johnson, Scholes, & Whittington, 2008). According to Olson (2008) an ecologically sustainable – or in their research called "Green"- strategy is one that is complementary to the business, operations and asset strategies and helps an enterprise to make decisions that have a positive impact on the environment. Unlike a green strategy, the business, operations and asset strategies are often well developed as a lot of attention has been paid to them. In order to formulate an effective green strategy the basic principles that are the basis of a green strategy should be leading an organization to make decisions based on solid business logic and which make good business sense (Olson, 2008). By applying the steps derived from Porter & Kramer (2006) explained in the next part of this chapter the focus will be on applying the organization's limited resources available on the issues most central to the organization's environmental footprint and reputation. Because the interdependence of business and society is often not recognized most corporate responsibility initiatives lead to uncoordinated Corporate Social Responsibility (CSR) and philanthropic activities that do not connect to the general strategy. These uncoordinated initiatives do not assist the firm in gaining a competitive advantage, or make any meaningful strategic impact.

Porter & Kramer (2006) have developed five steps that are required to develop a good corporate responsibility strategy, and according to Harmon et al. (2010) these steps are also applicable to sustainability in IT. These five steps are a sequential approach that assist an organization in developing a prioritized action plan:

1. Identify the points of intersection
2. Choosing which issues to address
3. Creating a corporate social agenda