

Green Organizations: A Primer

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Abstract: *Green organizations infuse as many of their operations as possible with green strategies which are appropriate for the organizations, their customers, and community. To them, going green makes economic, environmental, and productive sense. Although the concept of a green organization has already gained some traction, there are no direct regulatory and consumer constraints in operation. Popular companies are transforming their business practices into green ones. This paper provides a brief introduction to green organizations.*

Key Words: *green organizations, green technology, green economy, green IT*

I. INTRODUCTION

For governments, organizations, and business personnel the environmental issues like climate change due to increased pollution and constant depletion of natural resources are becoming a major concern. The natural resources are depleting at a faster rate whereby causing constant rise in energy prices globally. The business organizations are taking green initiatives and practices to make their organizations truly green. These green initiatives may take different forms such as using green equipment, green technology, having green buildings, green energy, green disposal, green design, green manufacturing, green logistics, green supply chains, etc.[1].

These days many organizations are under increasing social, economic and regulatory pressures to compete in the global market. They have recognized that sustainable development and green growth to be an important strategic initiative. They are searching for tools that provide support for a business strategy that encompasses social, economic, and environmental objectives [2]. They have realized that green and economic development can co-exist in a win-win situation. Environmentalist activist organizations have advocated the use of consumer pressure through boycotts of environmentally damaging products and through positive purchasing of green products.

II. GREEN STRATEGIES

In recent years, environmental impact has been regarded as a significant concern by both organizations and governments. There has been pressure on all organizations to respond to the growing global environmental crisis by making greening an imperative. With the advent of green IT, the green movement has entered business organizations. Green IT (Information Technology) is comprised of strategies and best practices for optimizing the usage of computing resources and reducing the environmental footprint of technology. The formation of green IT strategies is essentially a process of organizational change. Green IT includes a set of new technological innovations such as data center greening, server virtualization, energy-efficient computers, and cloud computing. It also includes a set of new organizational practices and strategies such as e-waste management, telecommuting, IT recycle and power management [3].

There are many ways of implementing green IT in organizations. The implementation can be approached from several methods: design, production, usage, disposal, standard and measurement, and strategies and policies. Figure 1 shows the six approaches to implementing green IT in organizations: (1) by designing eco-friendly IT; by (2) producing, (3) using, and (4) disposing the IT in an eco-friendly way; (5) by using metrics and measurement to promote, compare, and benchmark green initiatives, products, services, and practices; and (6) by making effective and actionable strategies for greening IT [4].

Although green IT is becoming popular, not every organization is ready to implement it. Therefore, it is necessary to consider ways to implement green IT practices in any organization [5] in addition to what we have in Figure 1.

- (1) *Buy energy efficient hardware:* Use hardware products including notebooks, workstations, power supplies, and servers that meet the EPA's Energy Star guidelines. This will assist organizations in achieving energy-efficient computing.

- (2) *Use virtualization technology to consolidate servers:* One can reduce the number of servers and the corresponding energy consumption by using virtualization technology.
- (3) *Consolidate storage with SAN/NAS solutions:* One can save energy through consolidation of storage using storage area networks (SAN) and network attached storage (NAS) solutions.
- (4) *Optimize data center design:* The green data center is a key green IT innovation for managing data and servers with greater energy efficiency and a lower environmental impact. Data centers consume a lot of energy and should have cooling system.
- (5) *Recycle systems and supplies:* One can donate old computer-related products to schools and nonprofit organizations. Much electronic waste can be recycled, the parts used to make new items.
- (6) *Reduce paper consumption:* One can reduce the consumption of paper. Use recycled paper or stop using paper altogether. Send documents as e-mail attachments rather than faxing.
- (7) *Encourage telecommuting:* By encouraging as many workers as possible to telecommute, one can reduce the amount of office space required. Telecommuting reduces costs for both employers and employees.
- (8) *Foster a positive culture of Green IT:* Create awareness for Green IT in the day-to-day activities and operation of the organization. Have **Green** IT policy which includes definition and vision of Green IT, strategic plans for Green IT, etc.
- (9) *Energy savings:* Use renewable energy. Procurement of laptop computers in preference to desktop computers can result in considerable energy saving.

III. CONCEPT OF GREEN ORGANIZATIONS

Green organizations are those that infuse green principles throughout their operations, programs, and services. They focus on empowerment to lift motivation and to create great workplaces. They integrate the key principles of energy efficiency, water conservation, and healthy indoor environments. Going green basically means reducing carbon footprint and striving for a net zero carbon footprint. Green is sensitive to people's feelings. It favors collaborative, cooperation, and effort to bring opposing points of view to consensus. It strives for community, cooperation, consensus, harmony, tolerance, and equality. Green is present in academic thinking, social work, and community activity.

In orange organizations, strategies are of prime concern. In green organizations, culture is paramount. Culture makes an organization unique and hard to imitate. It encourages employees to take charge of their own professional development and advancement. A shared culture is the glue that keeps empowered organizations from falling apart. It is closely related to communication and language use. The impact of green cultural change in an organization depends largely on the communication and participation of actors involved. Green leaders should be servant leaders. Green Organizations regard social responsibility an integral part of business [6]. A dominant concept in green organization is the family: employees are part of the same family and are there for one another.

In their report, Marien and Sales explain how the revolution is unfolding by briefly mapping some 150 organizations that are driving the greening of capitalism, and grouping them in seven meaningful categories: Business-Led Groups, Ethical Groups, Broadened Accounting Groups, Certifying Organizations, Green Investing Groups, Sustainability Consultants, and Green Business Publishing. Each of these groups is important in facilitating the revolution, especially those promoting corporate social responsibility [7].

IV. IMPLEMENTATION OF GREEN ORGANIZATIONS

Green IT, also known as eco-computing or green computing, is becoming a necessity, as more and more organizations are implementing some form of sustainable solutions. Although there are many other ways in which an organization can implement Green IT on a practical level, the implementation of green IT must consider four main dimensions: economic, technology, process, and people. The four dimensions are illustrated in Figure 2 [4].

- 1) *Economy:* This is the main dimension in organizational decision making. Vision, mission, strategy, and principles are the foundations for organizational decisions.
- 2) *Technology:* Green IT simply means using technology efficiently, while taking into account the triple bottom line: economic viability, social responsibility and environmental impact. Green IT technology supports hardware, software, network infrastructure, applications, data centers, and cloud computing. Organization must use their equipment proper to help reduce the footprint of their other business activities.
- 3) *Process:* Organizations can use IT on their main business processes. Environmentally friendly process is added to existing process to reduce carbon emissions and increase customer's satisfaction.
- 4) *People:* Human resources are difficult to transform because they have to be involved from the start, particularly the awareness of the importance of green IT. Every organization needs to raise their employees' awareness and behavior concerning IT.

Some popular companies (such as Wal-Mart, General Electric, Starbucks, Southwest Airlines, Nokia, Samsung, Sony etc.), run on green practices and culture. They have implemented green principles with great consistency. For example, ground teams at Southwest Airlines are empowered to seek creative solutions to passenger problems, without following the rule book.

V. BENEFITS AND CHALLENGES

The green principles have made some impact in the direction of a more humane society: the civil rights movement, the women's liberation movement, the global drive for environmental protection, health care reforms, and improved awareness of marginalization of minority segments of the society [6]. The consumers are getting smarter about environmental concern and costs over the life of a product.

Regardless of the environmental benefits, some skeptics doubt whether organizations are really greening or only window dressing. Making decentralization and empowerment work on a large scale is hard. Specific guidance by top management to their employees on how to implement and manage various green initiatives is often ignored. A major challenge for adopting cloud computing is convincing organizations that it is secure and that their data and information will be protected. Many organizations are nervous about letting a third party have ownership and control of their data and information [8].

VI. CONCLUSION

Green has been a worthwhile commitment for many organizations. Organizations worldwide are awakening to the reality that green business practices can provide competitive advantages while simultaneously producing economic benefits. Green organizations put their green beliefs into action and take the steps towards green initiatives. The influence of green activists on how organizations behave with respect to the natural environment is to be commended. More information on green organizations can be found in books in [8-10].

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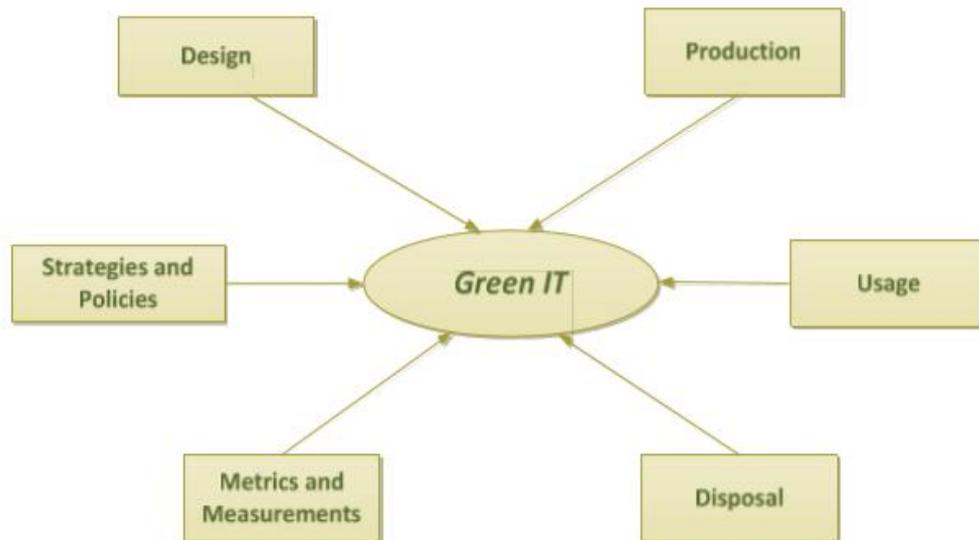


Figure 1 Six way for implementing green IT in organizations [4].

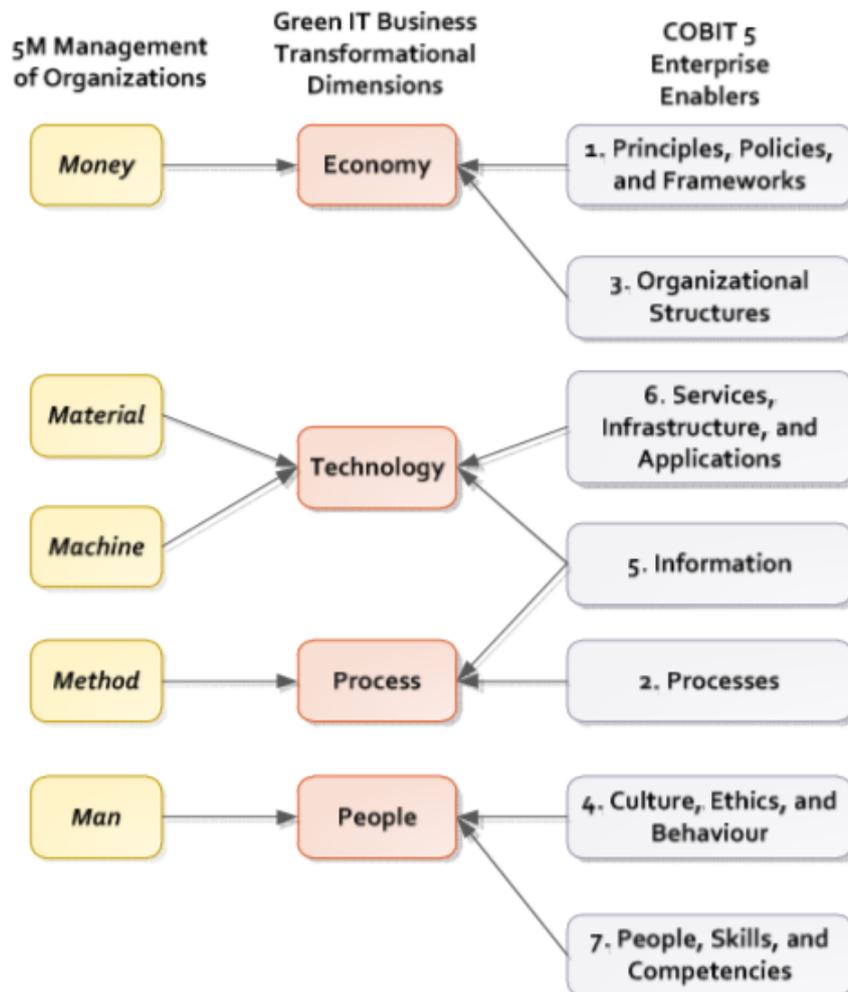


Figure 2 Four green IT business transformational dimensions [4].