



# IT Going Green

## A Comparison of Corporate and Personal Attitudes and Actions

By Kevin Moss

### Highlights

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- **Cost reduction** is the primary **driver** for green IT with 81% of respondents citing this as a major goal of their green IT initiatives compared to the next most important driver, **environment**, cited by 47% of respondents.
- **Return on Investment (ROI)** was cited as the major **barrier** to implementing green IT programs by 63% of respondents.
- Respondents report 58% of their companies have expressed concern, or have a policy about climate change. Most of the remainder have not expressed an opinion and only a small minority firmly believe it is not an issue.
- Only 30–35% of companies have begun implementing structural initiatives such as setting up of a green IT team, establishing executive sponsorship or introduction of an environmental management system.
- In contrast, 70–87% of respondents report their companies have implemented core environmental activities such as recycling, safe disposal of electronic equipment, consolidation and virtualization.
- Larger organizations<sup>1</sup> and organizations who had expressed concern about climate change are more likely to be taking environmental action. Nevertheless, smaller organizations and those which did not have a position on climate change still show significant adoption of core environmental activities. For example, adoption of virtualization is reported at 87% in larger organizations, 52% in small.
- Individuals feel **less strongly** about climate change **than the organizations for which they work**. Forty-five percent of individuals consider climate change to be caused by humans and to be a major risk compared to 58% of companies which have expressed concerns or have a formal policy.
- Individuals in companies with a formal policy on climate change are more likely to themselves consider it an important issue than individuals in companies with no opinion on the issue. Fifty-four percent of respondents in companies with a formal policy on climate change have a personal view that human activity is a major cause compared with 38% of respondents in companies that have no position.
- Individuals' actions at home and in the workplace are significantly impacted by whether or not they consider climate change an issue. Nevertheless, even those who do not consider it an issue are taking significant levels of action on many items. Seventy-six percent of all respondents report turning off personal electronic equipment each day and 55% report buying certified energy efficient devices.
- With the exception of teleconferencing, the adoption of IT technologies as a strategic solution to assist the broader corporation to reduce overall energy usage and emissions is low—in the 15% to 35% range.

<sup>1</sup> Large companies are reported as companies where IT supports over 10,000 employees, medium companies where IT is supporting 1,000 – 9,999 employees and small companies where IT is supporting less than 1,000 employees.

# IT Going Green

## A Comparison of Corporate and Personal Attitudes and Actions

## Introduction

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IT professionals are increasingly being asked to consider environmental impact and energy usage as criteria in their decision making and strategic planning. Objectives are wide ranging. For some, especially those managing data centers, energy availability can become a limit to expansion. For others the objectives are long term, less tangible and include mitigating climate change. As a result of the broad range of objectives, potential activities are also broad in scope—ranging from recycling electronic devices, through procuring renewable energy to employing teleconferencing as a substitute for travel.

From June 15, 2009 through June 25, 2009, BT in North America conducted a web based survey on Green IT, which was completed by 150 IT professionals. The survey was designed to gain insights into three areas relating the adoption of Green IT:

- **Objectives and activities that reflect the green IT agenda**
- **The relationship between the position of the enterprise and the position of the individual IT professional on green issues and how that impacts the green IT activities of that organization**
- **Awareness among IT professionals of the role of IT as a contributing solution to energy and climate issues**

The survey was posted on the BT Global Services web site. Invitations to participate in the survey were also sent to subscribers of BT's customer newsletter. All Web survey responses were automatically collected into a survey tool. Any questions skipped or improperly answered by survey respondents were not included in the tabulations. Not-applicable responses were also not included in the tabulations. Each chart includes the number of valid responses for that particular question (e.g., N=100 indicates 100 responses). Percentages shown in some charts may not sum to 100 percent due to rounding.

## The Bottom Line

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Organizations are taking environmental activities seriously within their IT operation. The survey suggests that this is enabled in part by the overlapping objectives of environmental benefit and cost reduction. This is encouraging in that the overlapping objectives have helped positive environmental action, but a concern for the future when further mitigation of environmental impact will require incremental spend.

Perception of IT professionals is that climate change as an issue is recognized by approaching 2/3 of their organizations. The good news is that even organizations that have not expressed an opinion on climate change or do not have a green IT team are still taking action on many environmental issues within the IT team.

There is plenty of scope for more organizations to accelerate action by building structural approaches such as IT green teams. Two thirds of IT organizations surveyed do not currently have a green team.

Although respondents report significant levels of action on such activities as virtualization and consolidation, there is limited implementation of energy and carbon audits or environmental management systems. The common wisdom that "if you cannot measure it you cannot manage it" applies here as much as in other spheres of business. IT teams could become much more effective in this space by applying measurement and audits to ensure their activities are having optimum impact.

While the range of activities in place indicate that awareness of the role of IT as an energy and carbon burden is high, responses suggest that awareness of the role of IT as a strategic solution to the broader issues of energy consumption and carbon emissions of companies is far lower. Even the most conservative reports, such as SMART 2020, identify

the role of IT as a solution to carbon emissions reduction as five times higher than its burden as an emitter. However, based on responses, it looks as if this opportunity for IT professionals to bring strategic value to the organizations they serve is being overlooked.

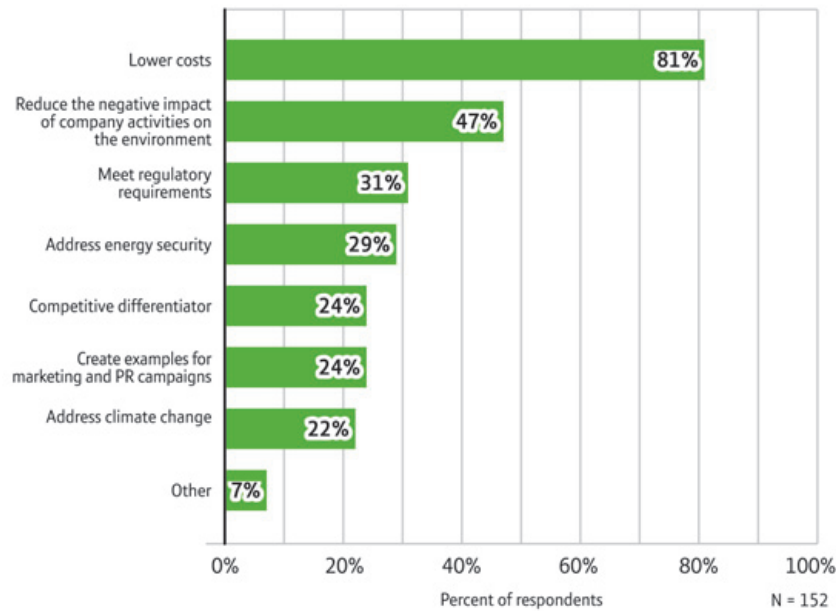
Organizations are a little ahead of individuals in expressing concern about climate change specifically and the results indicate that organizations can help lead individuals in their views. But, individuals and organizations alike report taking similar levels of action in the broader environmental space. While many organizations are starting to focus closely on green IT there is still a lot of room for growth. Successful vendors will be those that recognize the need to meet ROI hurdles as well as green objectives and meet that need through their services and the education and information provided in support of those services. IT departments in turn need to look at solutions holistically, taking into account both acquisition cost as well as in-life energy costs, and executive leadership must take a long term approach to business cases.

## PART 1: Objectives and Activities that Reflect the Green IT Agenda

### Objectives

Cost reduction was clearly identified as the primary driver for green IT, with 81% of respondents citing this as a major goal of their green IT initiatives. Just under half of respondents cited reducing the impact of company activities on the environment, with only less than a quarter referring to climate change specifically and a similar proportion pointing to competitive benefits and marketing and PR.

Major goals of green IT initiatives undertaken by enterprises

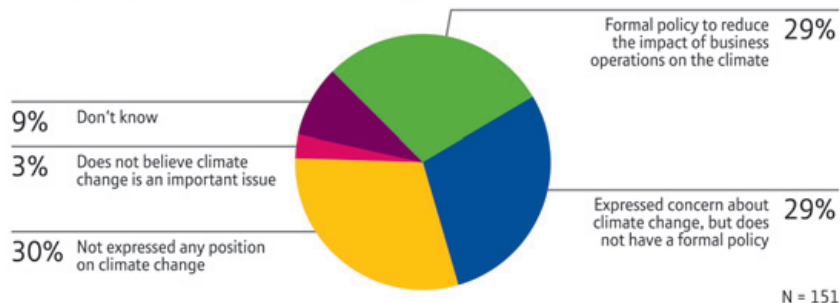


### Enterprise Position on Climate Change

Companies are split pretty evenly between those that recognize climate change concerns and have a formal policy, those that recognize the concern but have no policy and those that have no position. Only a small minority of respondents (3%) identified that their company specifically does not believe climate change is an issue.

According to respondents, company size is not a determinant of the extent of an organization's concern about climate change. However, large companies that have a concern about climate change are more than twice as likely to have converted that concern into a formal policy (35% versus 15%). In large companies, employees appear to be less informed about their organization's position, with 17% of respondents reporting not knowing their company's position on climate change, versus 6% for medium and 3% for smaller companies.

Enterprise position on climate change

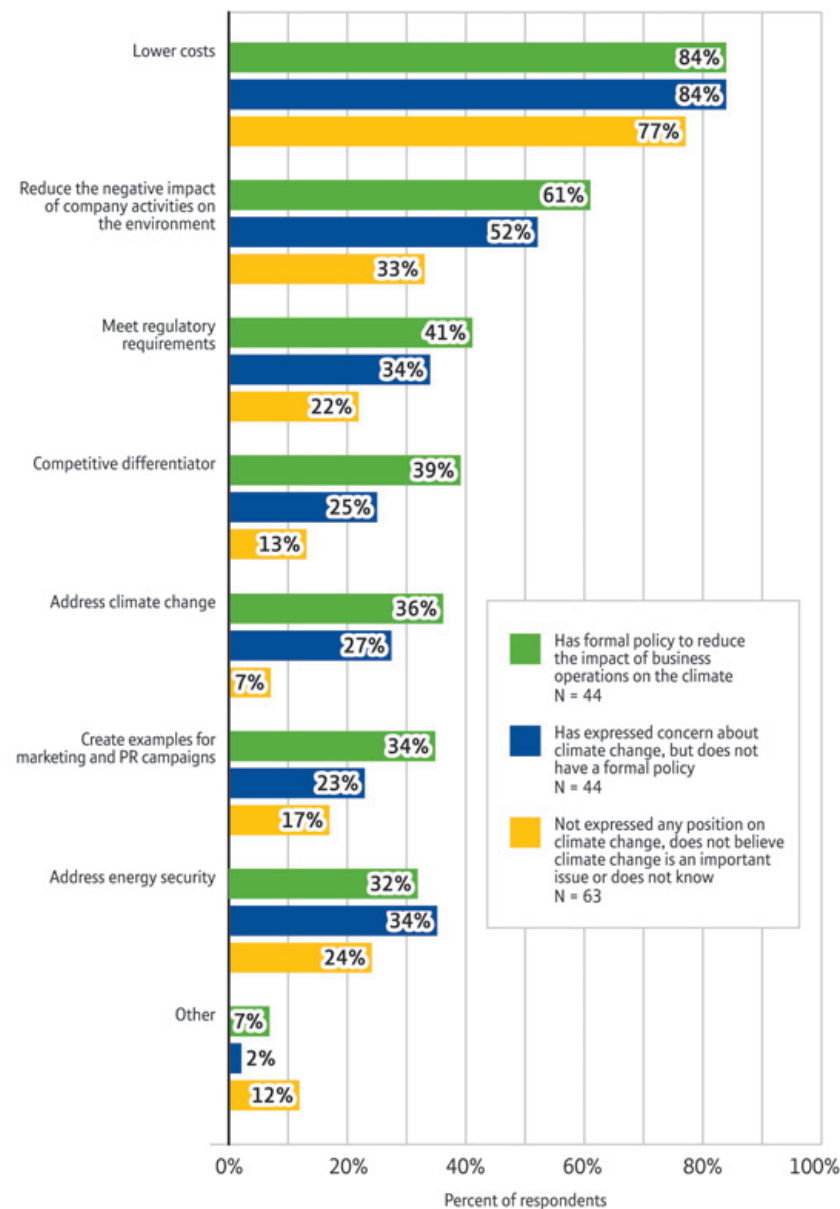


## Does a Company's Position on Climate Change Impact the Green Objectives of the IT Team?

There was little evidence of variation in objectives by company size. However, there was significant variation determined by a company's policy position on climate change.

Cost reduction featured equally prominently across all categories, but reducing negative impact on the environment and addressing climate change were significantly more important features for companies with a policy than those without a position on the issue. Regulatory compliance, competitive differentiation and generating marketing and PR examples also featured more highly for companies with a formal policy than those with no position. There is a clear pattern that those organizations with a formal policy are more likely to have recognized both the environmental concerns as well as considered the commercial benefits beyond cost reduction.

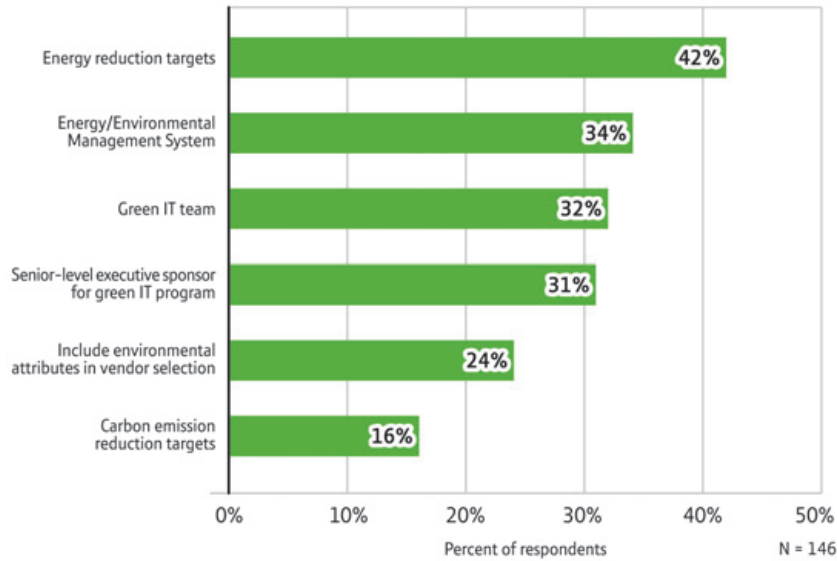
Major goals of green IT initiatives undertaken by enterprises compared to their position on climate change



### What Structural Initiatives have IT Departments Put in Place to Address Green?

A third of respondents identified their companies as having a green IT team, executive sponsors and/or environmental management systems (EMS) and just over 40% as having energy reduction targets. In contrast, only 16% were reported to have carbon reduction targets.

Enterprise structural initiatives now in place



Larger companies are more likely to have these structural initiatives in place. For example, respondents from companies over 10,000 people report 42% having a green IT team and 44% have executive sponsorship compared to 19% for companies of less than 1,000 people against both activities. This may partly be that larger companies have a greater need to introduce formal structures to impact change.

Distinctions are even greater according to whether a company has a formal policy. Of companies with a climate change policy, 59% have a green IT team and 67% percent have executive sponsorship. Respondents from companies with no position or a negative position report 15% and 11% respectively against the same two initiatives. This pattern is consistent across the remaining initiatives.

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**Companies with a climate change policy are almost four times as likely to have a green team in IT as those without.**

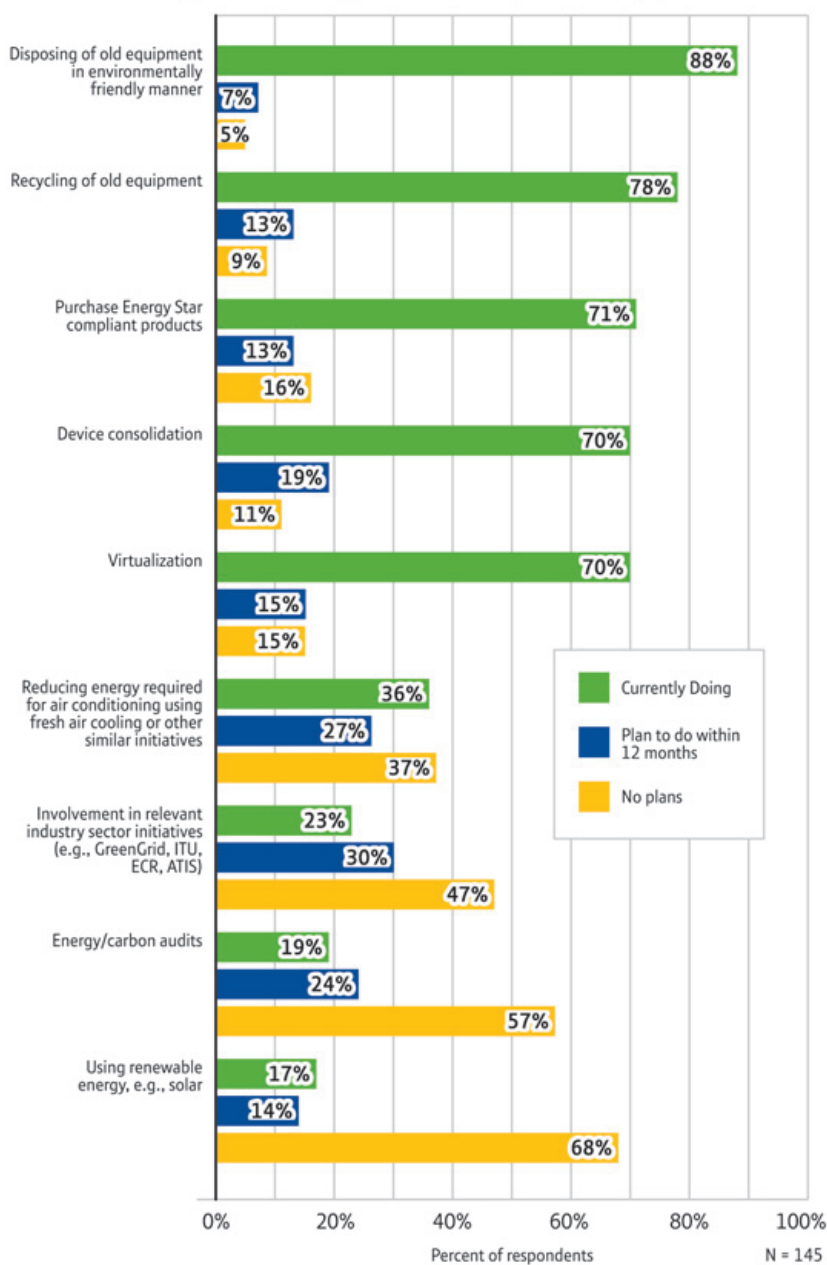
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### What Actions are Being Taken?

Respondents reported the highest levels of activity for recycling, environmentally friendly equipment disposal, device consolidation, energy star compliance and virtualization. Activities in these areas were reported in the ranges of 70-80%, a similar order of magnitude to the 84% of respondents who reported cost as a major objective for action, but considerably higher than the responses to whether companies have a Green IT team, executive sponsor and/or EMS in place. The implication is that structural initiatives are not necessarily required for action to be taken.

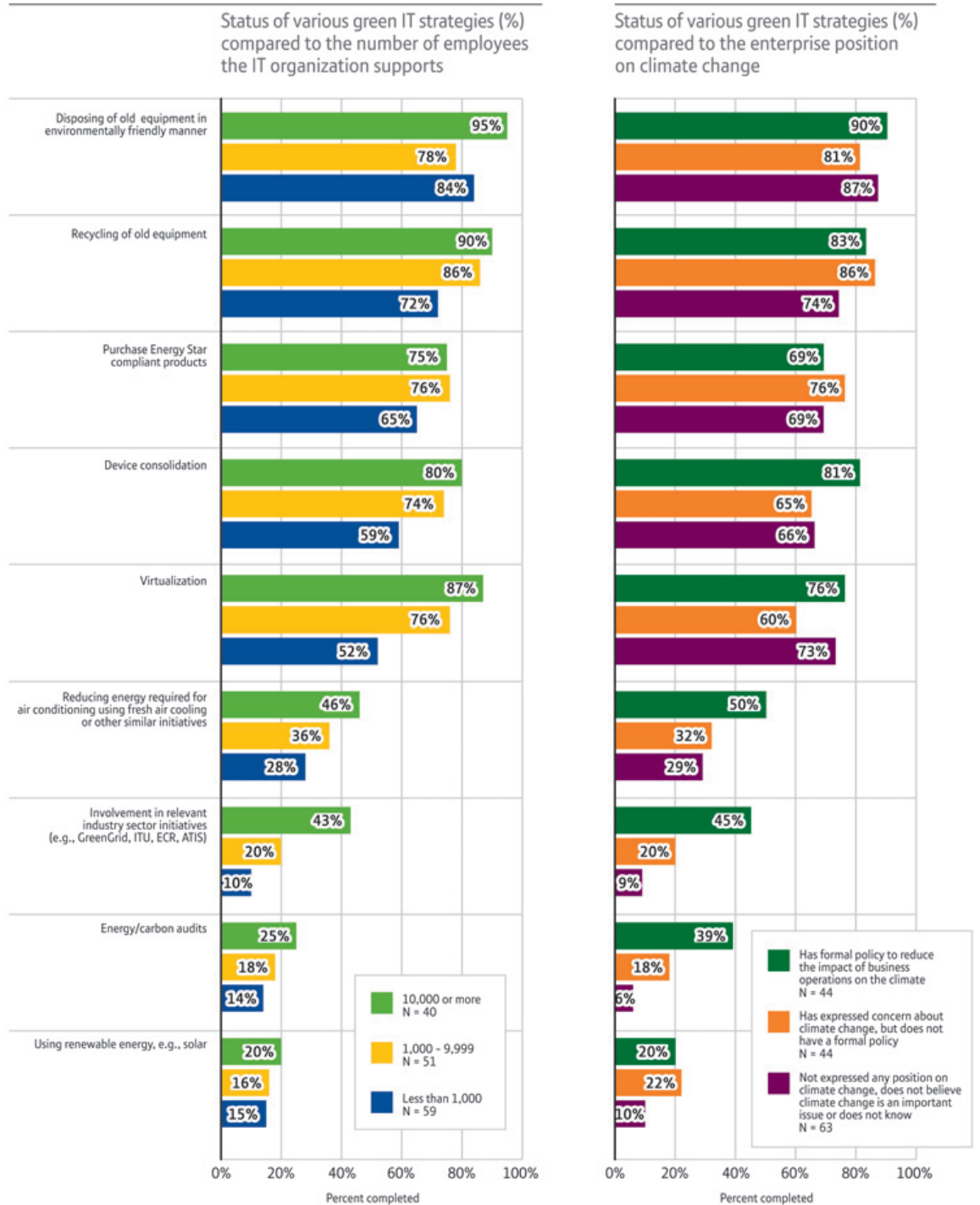
Activities in the areas of renewables and cross-sector initiatives were an order of magnitude lower—in the 20% range. This is not surprising. Cross sector initiatives are resource intensive to support and renewable energy is still an expensive proposition in many parts of the country. More surprising was the low percentage of respondents reporting actions to reduce HVAC usage—an activity which has one of the best returns for reducing energy consumption, especially in data centers. This may be due to responsibility for HVAC falling to facilities or building operations, rather than IT and so not being reported by IT professionals.

Status of various green IT strategies in the IT organization (%)



Analysis of responses by company size shows larger companies are more likely to be taking action than smaller, across the range of reported activities.

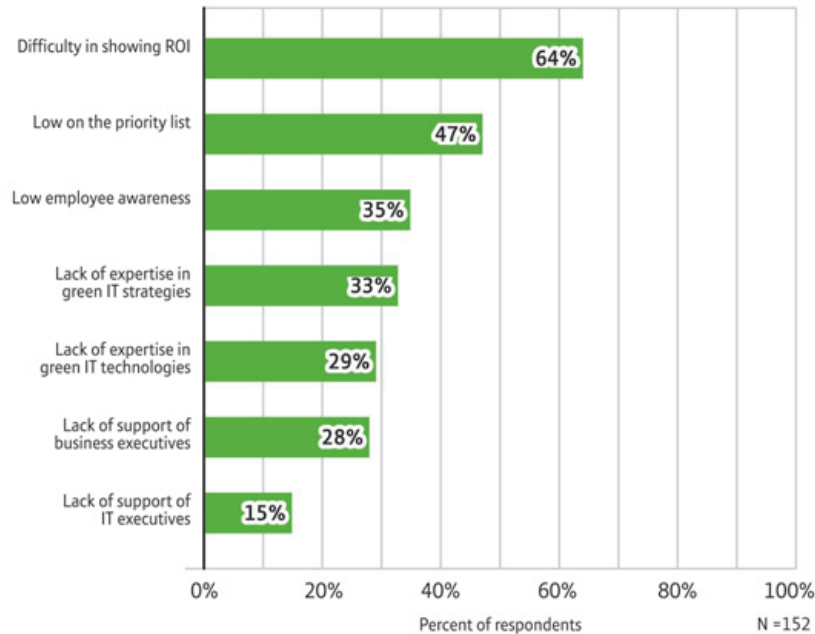
Companies with a policy position are more likely to be taking action than those without in most activity areas with a couple of notable exceptions. Purchasing Energy Star compliant products and implementing virtualization are independent of a company's position on climate change. High rates of adoption of virtualization may be due to benefits beyond green, such as disaster recovery. Adoption of Energy Star might be due to the prevalence and long term awareness of that specific rating system and is a good indication of the power of such programs.



### What Are the Barriers?

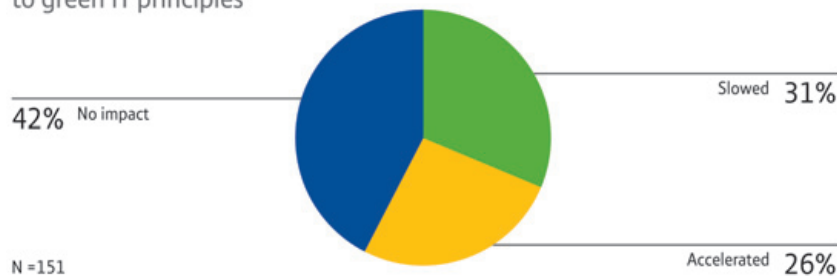
Consistent with having identified cost reduction as the main objective of green IT activities, respondents identified ROI as the main barrier for further activities.

Significant barriers to the implementation of green IT programs



The impact of the recession is reported to be very varied. Although we see no specific correlations by company size, there is an interesting pattern in the data that shows that companies with a formal policy on climate change are much more likely to be reporting that the recession has accelerated their green IT activity (42%), whereas only 27% of companies with a stated concern but no policy report the recession has accelerated their green IT activity and only 14% of the remaining respondents report that it has accelerated their activity.

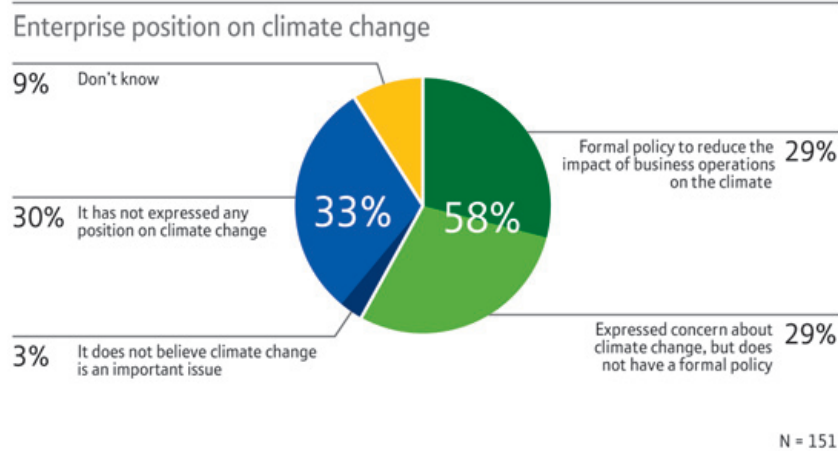
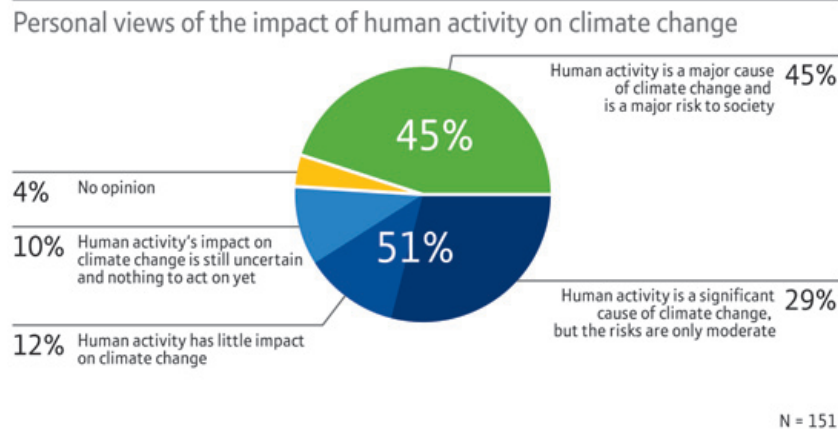
Impact of the economic recession on organization's commitment to green IT principles



Companies with a climate change policy are up to three times as likely to report the recession accelerated their green IT activity as those without.

## PART 2: The Company and the Individual

This survey also allowed for a comparison of the approach of the company with the approach of the individual employed by the company. Inevitably, individuals are more aware of their own opinion than the opinion of their company and so some subjective judgements are required.



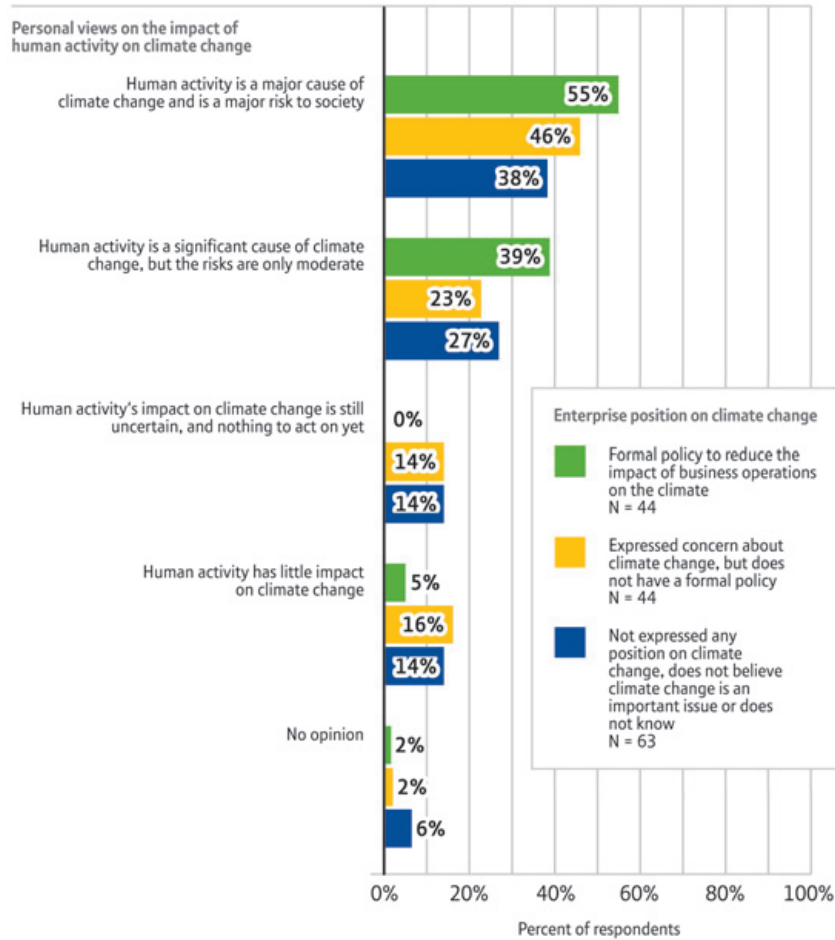
Fifty-eight percent of respondents report that their companies have a formal policy or a concern on climate change. We might compare this to the 45% of individuals who report that they believe that human activity is a major cause of climate change and is a major risk to society. This indicates that companies are somewhat ahead of their individual employees (at least in the IT space) in their view that climate change is an issue for society.

Only 4% of individuals had no opinion, whereas respondents identified that almost 30% of their companies had not expressed an opinion. However, only 3% of companies have firmly stated climate change is not an issue compared to almost 12% of individuals. In total, 51% of individuals fall into the category who believe human activity has little impact or that the risks are minimal or uncertain.

**Companies are somewhat ahead of their individual employees in their views that climate change is an issue for society.**

Responses indicate that in companies with a formal policy, the employees are more likely to have personal views supporting the concept of human impact on climate change than in companies with a stated concern but no policy. Employees in companies with no view or negative view on climate change are the least likely to have personal views supporting the concept.

Personal views on the impact of human activity on climate change compared to the position of the enterprise on climate change



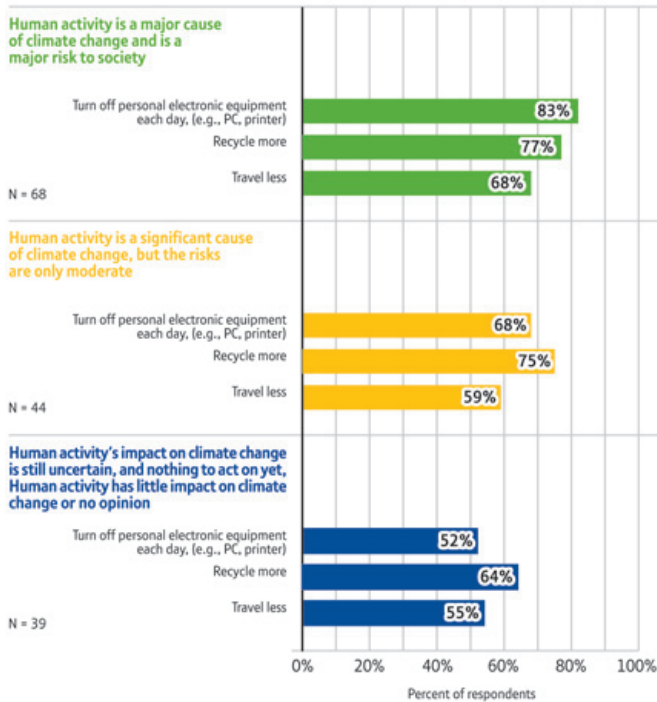
Employees in companies with a formal policy on climate change are most likely to have personal views supporting the concept.

The likelihood of personal action in the workplace or at home was not influenced to any notable extent by whether or not the respondent's employer had a policy or had concern about climate change. It was, however, influenced by whether or not the individual had a concern about the issue.

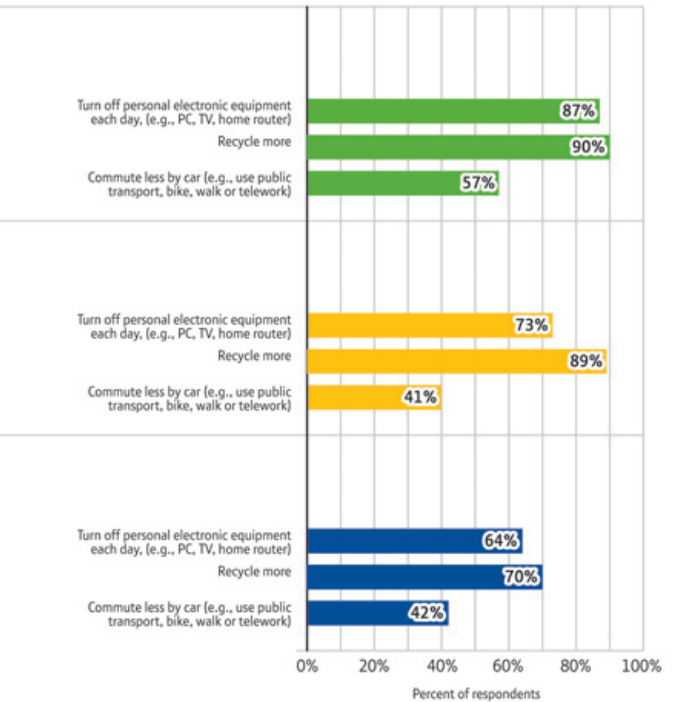
But, even among respondents who expressed uncertainty, or a view of little or no impact, there was still a significant level of activity claimed in the 40-60% range across many of the activities.

This could be due to a component of 'playing it safe' on the part of those individuals and also support for many other environmental issues, such as conservation and energy efficiency even among those who are not adherents of climate change concerns.

Peoples' actions to reduce environmental impact at their **job** compared to their personal view of the impact of human activity on climate change



Peoples' actions to reduce environmental impact in their **personal life** compared to their personal view of the impact of human activity on climate change



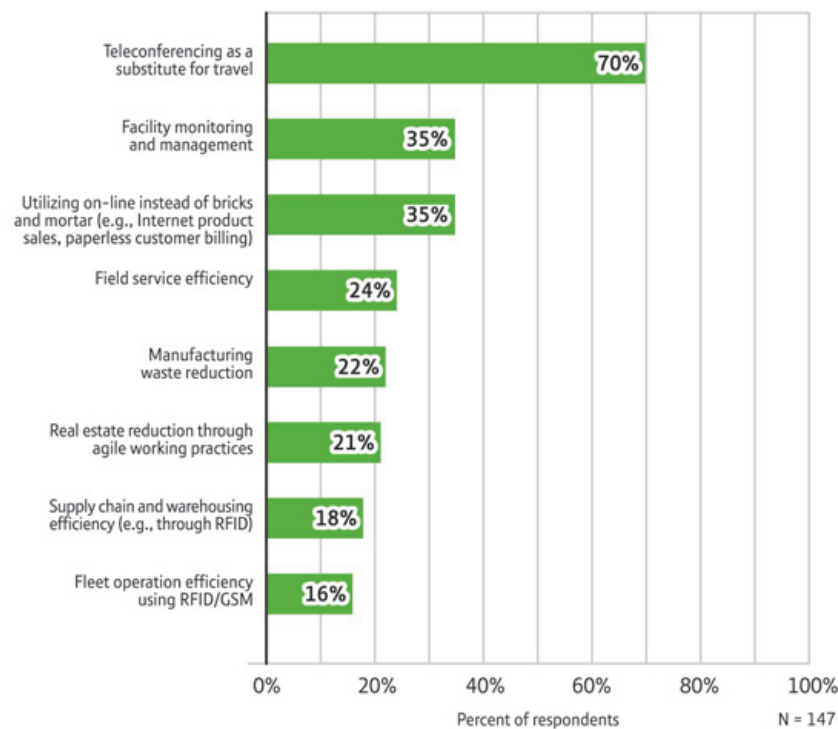
## PART 3: IT—Problem or Solution?

The survey was also intended to help understand the awareness of using IT as a strategic solution to reduce a corporation's environmental impact beyond the direct impact of the IT infrastructure.

An example of this might include implementation of RFID or GPS technologies to reduce the miles driven by a company's vehicle fleet.

With the exception of teleconferencing, respondents identified their corporations to be taking much less action in this area than in reducing the direct impact of the IT department. Free form examples provided also indicated a limited awareness of the role of IT to provide strategic solutions to the corporation in this space. Most responses identified internal IT equipment and IT department activities.

Emission reduction solutions IT has implemented or is currently developing (%)



With the exception of teleconferencing, respondents identified their corporations to be taking much less action in this area than in reducing the direct impact of the IT department.

## Respondents Comments

Respondents who selected Other as the response to the question “If your enterprise has undertaken any initiatives to address green IT (whether or not it has a formal policy or position), which of the following were major goals of those initiatives?” made the following freeform comments:

- **Meet LEED certification**
- **Increase employee productivity by allowing collaboration with other county agencies and service providers without travel time**
- **Improve productivity of teams that are in geographically disparate locations**
- **We manufacture products which are market leading in terms of energy efficiency**
- **Reduce Carbon Tax assessment \$**

A number of respondents highlighted LEED activities. The inclusion of employee productivity was notable and an incremental benefit to those identified in the survey questions.

Freeform responses to the question “Are there any other solutions that your IT organization has implemented or is developing to help the enterprise minimize emissions? If so, please describe.” included the following;

- **Yes, Green is a PR campaign ran by people with no understanding of the world. CO2 is a natural gas that is NEEDED by all plants, just like O2 is NEEDED by all people and animals.**
- **Just an FYI...One major volcanic eruption spews more “pollutants” into the air than 50 years of mans technology does...Green should be for conservation, not climate. We are way too insignificant to affect climate...**
- **We are not doing these projects to reduce carbon emissions. These projects are part of increasing worker productivity and accountability.**

These responses identify the equal passion behind the views of IT professionals who do not support the view that climate change is a problem caused by humans, nor that CO2 reduction is necessarily the solution.

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- **Mobility** – reduce cost and increase productivity through information access and collaboration regardless of location, by simplifying the complexity attributed to the control and management of mobile assets and expenses.
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- Ethical Hacking
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- IPv6
- IT Infrastructure Library (ITIL)
- IT Operations Centers
- Malicious Code
- Network Access Control
- Network and Systems Management Total Cost of Ownership
- Network Quality of Service
- Network Security
- Networked Application Performance
- Outsourcing and Offshoring
- Patch Management
- Performance Management and Engineering
- Server Virtualization
- Service Level Management and Service Level Agreements
- Storage Networking
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