



# The Future of “Green” IT: Implications for Software Solutions

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A Research Report Prepared For:



November 2008

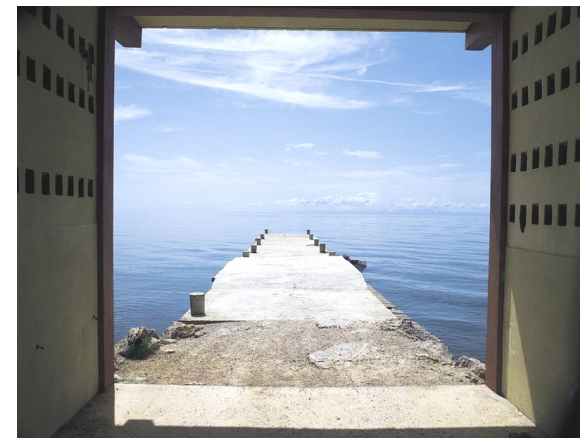
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GLOBAL RESEARCH PROTECTING BRANDS AND REPUTATION

# Contents

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<b>Introduction</b>	<b>3</b>
<b>Background and Purpose</b>	<b>4</b>
<b>Objectives</b>	<b>5</b>
<b>Research Method</b>	<b>6</b>
<b>Summary of Findings</b>	<b>7</b>
<b>Conclusions</b>	<b>13</b>
<b>Detailed Findings</b>	<b>15</b>



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# INTRODUCTION



# Background

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- On August 2, 2007, the United States Environmental Protection Agency issued a report on the challenges of energy efficiency in information technology. That report noted with the shift from paper-based to digital information, information technology and data centers in particular have become essential to the functioning of business, communications, academic, and governmental systems. These IT operations are found in nearly every sector of the economy.
- The increasing demand for computer resources has led to significant growth in the number of computers and servers. This increased growth has led to a corresponding estimated doubling in the energy used by these systems and the power and cooling infrastructure that supports them.
- Organizations in the IT sector are addressing issues such as increased energy costs, increased emissions from electricity generation, increased strain on the existing power grid to meet the increased electricity demand, increased capital costs for expansion of data center capacity and construction of new data centers.

# Objectives

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- Corporations and their IT departments are recognizing their impact or “carbon footprint” on the environment and are actively engaged in finding “green” IT solutions. While many have looked to hardware and power systems as part of these solutions, it is becoming increasingly recognized that software management is also a key part in the role of the IT Sector.
- Therefore, the objectives of this research include:
  - Determining how environmental considerations impact current and future IT investment decisions
  - Learning if and how organizations are considering software solutions in relation to hardware solutions to improve the efficiency of their IT infrastructure
  - Is “going green” just about conserving energy or are there other factors considered in implementing “best practices” or not implementing?
  - Determining which technology areas may be impacted based on “green”
  - Learning how purchase decisions are driven by a “green” IT need
  - Criteria used to assess a supplier's position/maturity related to environmental sustainability

# Research Method

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- To meet these objectives, CA commissioned Echo Research to conduct a research survey among IT Decision Makers at companies with \$500 million or more in annual sales volume.
- In order to qualify for this research, participants must have been responsible of have oversight for environmental issues associated with IT hardware and software and be responsible for at least two of the following:
  - ✓ Administration of IT hardware, software and services
  - ✓ Determining IT hardware, software and services needs
  - ✓ Approving computer and networking consultants
  - ✓ Approving or selecting manufacturers or providers of IT hardware, software and services
- A total of 252 interviews were completed with a random selection of companies in the United States and United Kingdom. Sixty percent (n=151) of the interviews were completed in the U.S. with the remaining 40% (n=101) completed in the U.K.
- All interviewing was completed in April, 2008.

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# SUMMARY OF FINDINGS



# Summary of Findings

## IT Plays Major Role in Corporate “Green” Initiatives

IT is being tasked with implementing plans to help their organizations be more energy efficient.

- Included in IT’s stated policies or plans is the implementation of energy efficient hardware and software solutions and reducing energy usage through system automation.

## Software Solutions Very Important to Energy Efficiency

Eight-in-ten in the US and almost three-fourths in the UK consider software solutions to be very important to their organization’s ability to promote energy efficiency.

- Virtualization and efficiency are important areas in the US while the UK places slightly more importance on data center consolidation and PC and server power management.



# Summary of Findings

## Budgets Already Include Energy Efficient Software Solutions

Over nine-in-ten in the US and eight-in-ten in the UK have already included energy efficient software solutions in their budgets.

- US is more likely to budget for software for the virtualization and/or consolidation of servers, storage and data centers.
- UK is more likely to budget for software to implement PC and server power management.



# Summary of Findings

## Energy Efficient Software Management Solutions

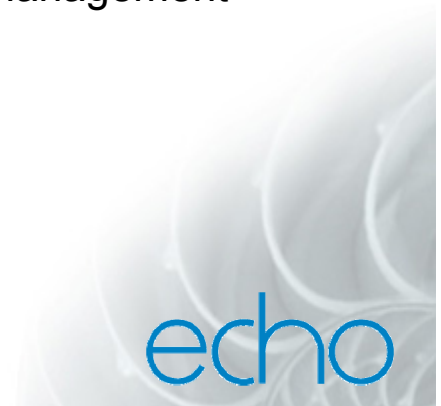
The application of software solutions to help manage energy efficiency is significantly higher in the US than in the UK.

- Over one-half of the IT executives surveyed in the US report that their companies are already using software to more efficiently manage servers, mainframes and data centers overall.

## Software Solutions Currently Implemented

The majority of companies surveyed are currently using software solutions network, database, systems performance, configuration, and asset management.

- US is significantly more likely than the UK to currently be using network management software and virtual machine software.



# Summary of Findings

## US: Software Budgets vs. Contribution of Current Solution

- Of US companies using software applications, virtual machine software and network management software are the areas above average for budget and for current contribution to “green” initiatives.
- Desktop management, storage and records management, and event automation are also above average for budget however, the solutions currently in place are considered at or below average for contribution to “green” initiatives.

## US: Software Budgets vs. Satisfaction with Current Solution

- In the US, virtual machine software and event automation are above average areas for budget and IT executives are satisfied with the solution in place.
- Desktop management, network management, and storage and records management are above average for budget and the solution currently being used is rated less than average for satisfaction.

# Summary of Findings

## UK: Software Budgets vs. Contribution of Current Solution

- In the UK, virtual machine software, application performance management, and database management are the software areas above average for budget and for current contribution to “green” initiatives.
- Project/portfolio management, job scheduling, and event automation are also above average for budget however, the solutions currently in place are considered at or below average for contribution to “green” initiatives.

## UK: Software Budgets vs. Satisfaction with Current Solution

- Virtual machine software is the only area that UK IT executives consider to be above average for budget and provide above average satisfaction ratings with their current software’s contribution to “green” initiatives.
- Database management, application performance management, project/portfolio management, job scheduling and event automation are above average areas for budget and IT executives are currently less than satisfied with the solution currently in place.

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# CONCLUSIONS



# Conclusions

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- The biggest influencers to adopting “green” technology are cost implications and disruption in IT services; being responsible to the environment is secondary.
- The adoption of IT hardware is more costly and more likely to result in IT service disruption thus creating the need for less expensive and easier to implement software solutions.
- The adoption of software solutions is a common attitude among IT executives and their budgets include software purchases for IT virtualization, consolidation and system efficiency.
- There are opportunities to work with customers to maximize the energy efficiency of new hardware installations and, perhaps more important, to extend the life, efficiency and capacity of current hardware configurations through the adoption of software solutions

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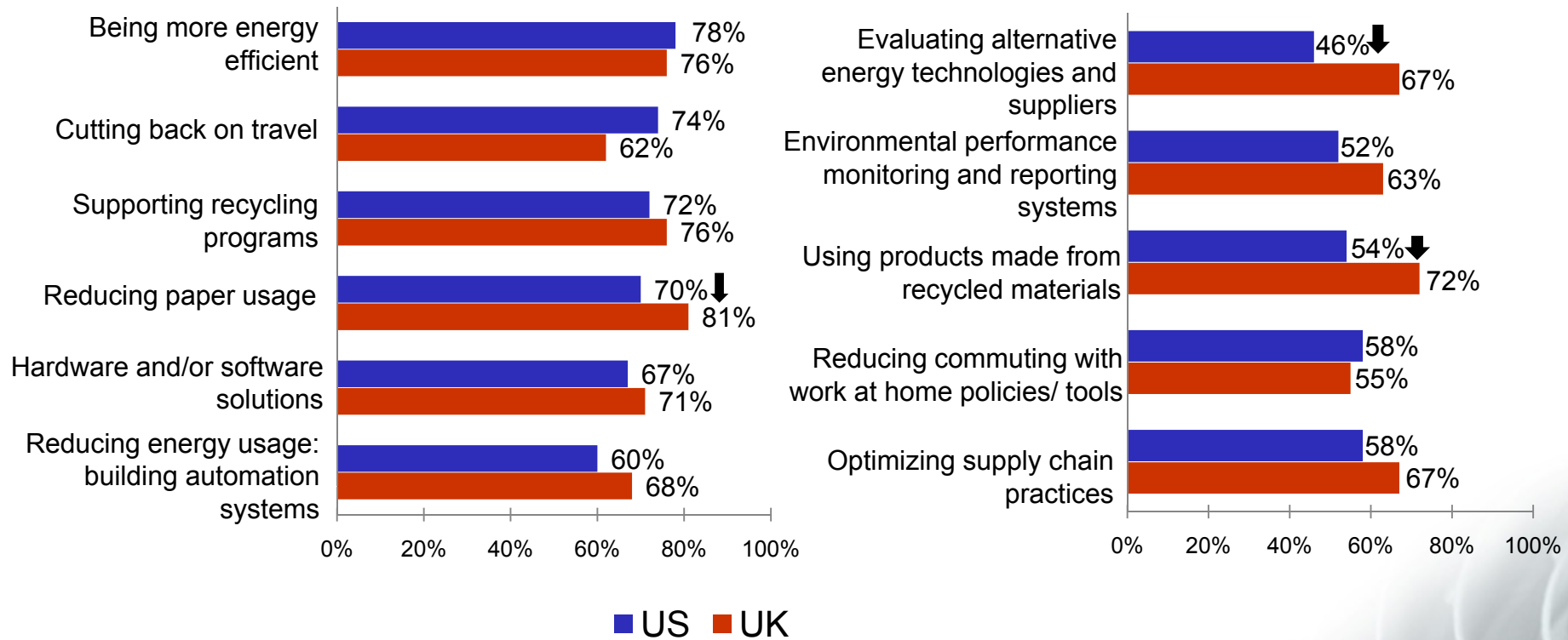
# DETAILED FINDINGS



# IT Plays Major Role in Corporate “Green” Initiatives

IT is being tasked with implementing plans to help their organizations be more energy efficient.

- Included in IT’s stated policies or plans is the implementation of energy efficient hardware and software solutions and reducing energy usage through system automation.



↓ Significantly lower in the US than in the UK at the 95 percent level of confidence

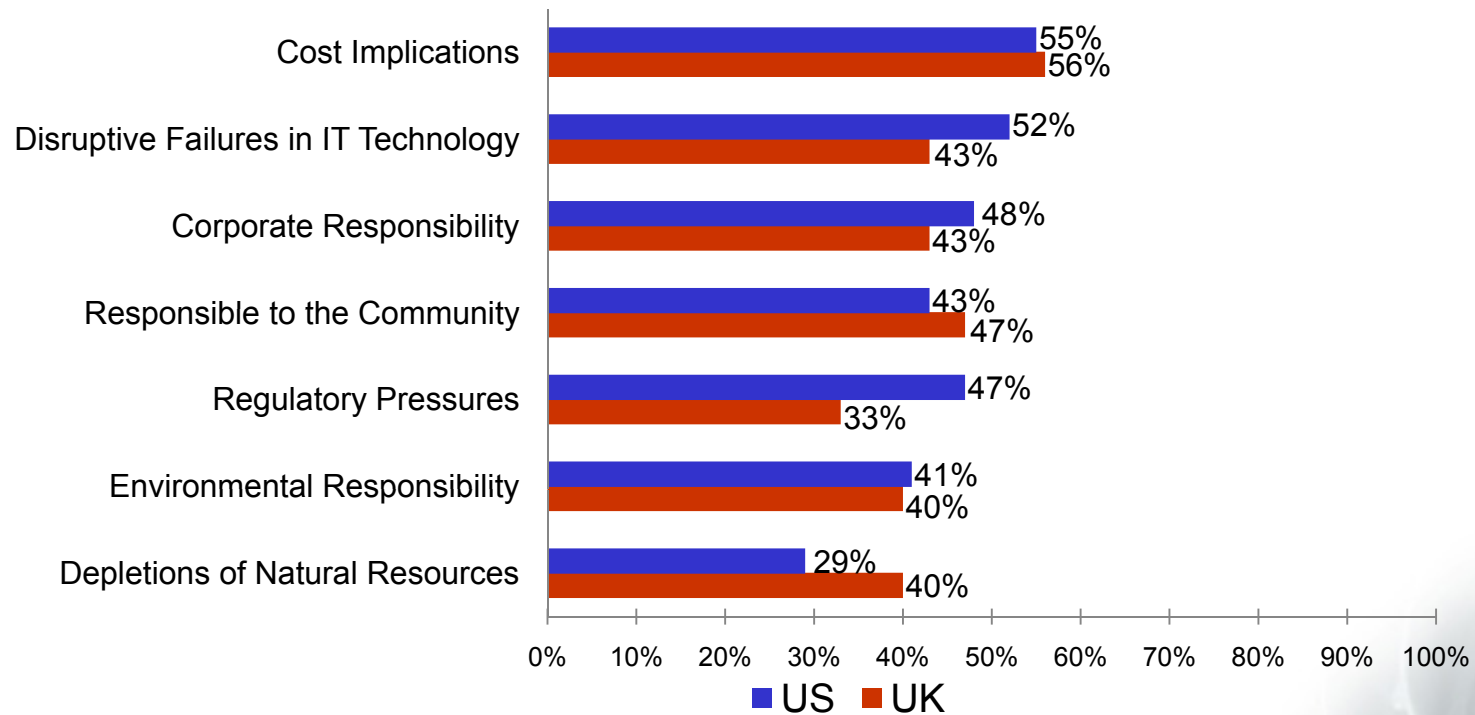
Q.3 Please tell me if your IT department has a stated policy or has implemented plans to help your organization carry out of this initiative?



# Cost Implications: Biggest Influence to "Green" IT Protocol

In the US and UK, cost implications top the list of concerns for companies when deciding to implement "green" IT solutions.

- US IT executives are also influenced by disruptive IT failures, corporate responsibility and regulatory pressures.
- In the UK, community responsibility and depletion of natural resources are second tier influencers.



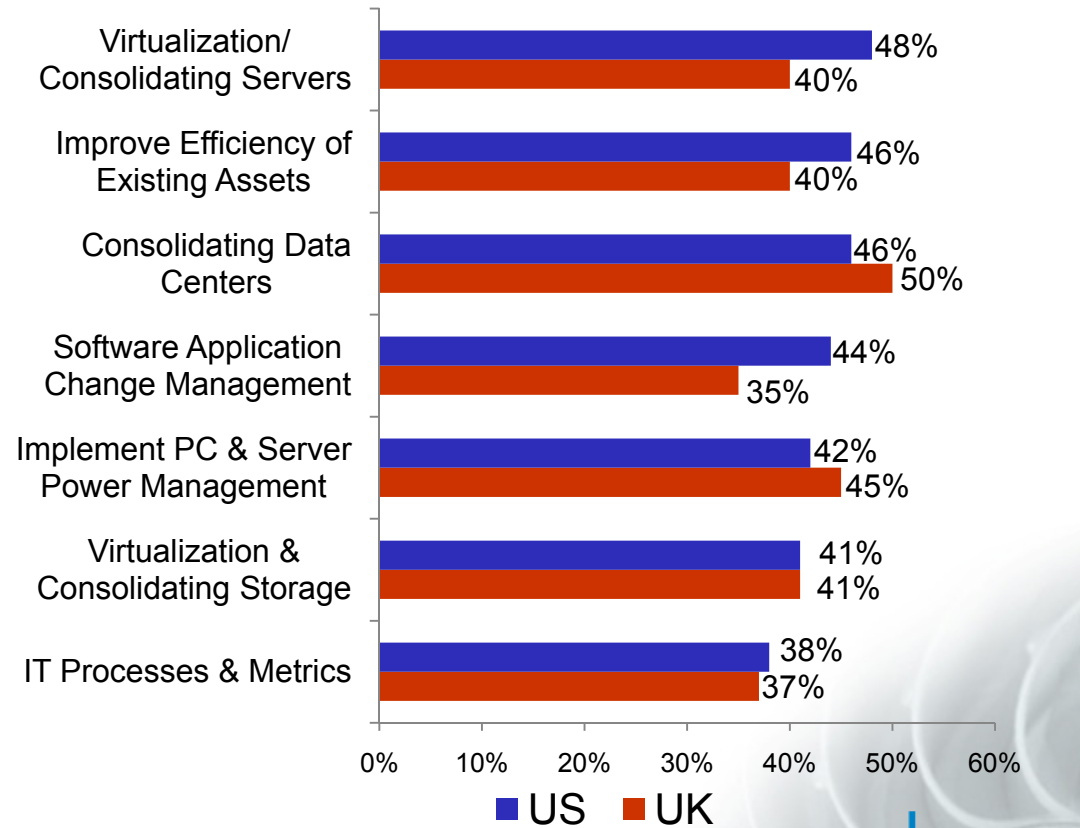
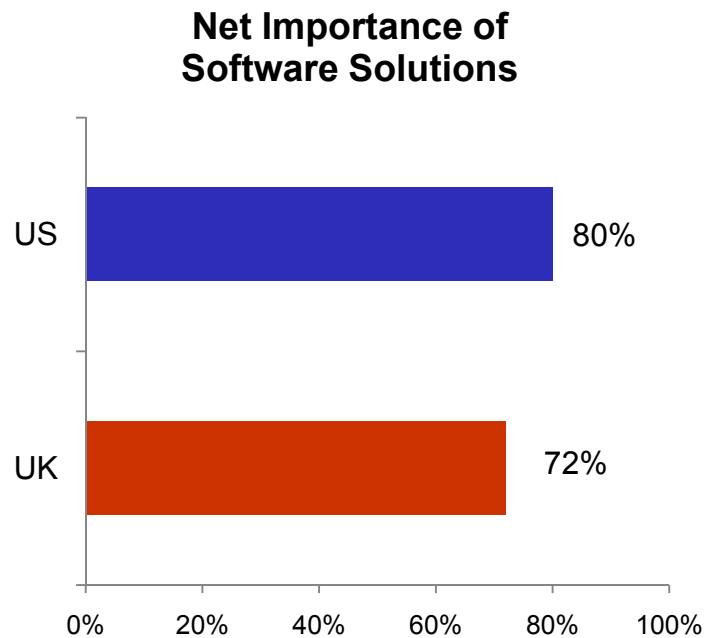
Q.8 Various factors could influence or not influence "green" IT protocol.  
How influential or not influential are each of these factors to your company?



# Software Solutions Very Important to Energy Efficiency

Eight-in-ten in the US and almost three-fourths in the UK consider software solutions to be very important to their organization's ability to promote energy efficiency.

- Virtualization and efficiency are important areas in the US while the UK places slightly more importance on data center consolidation and PC and server power management.

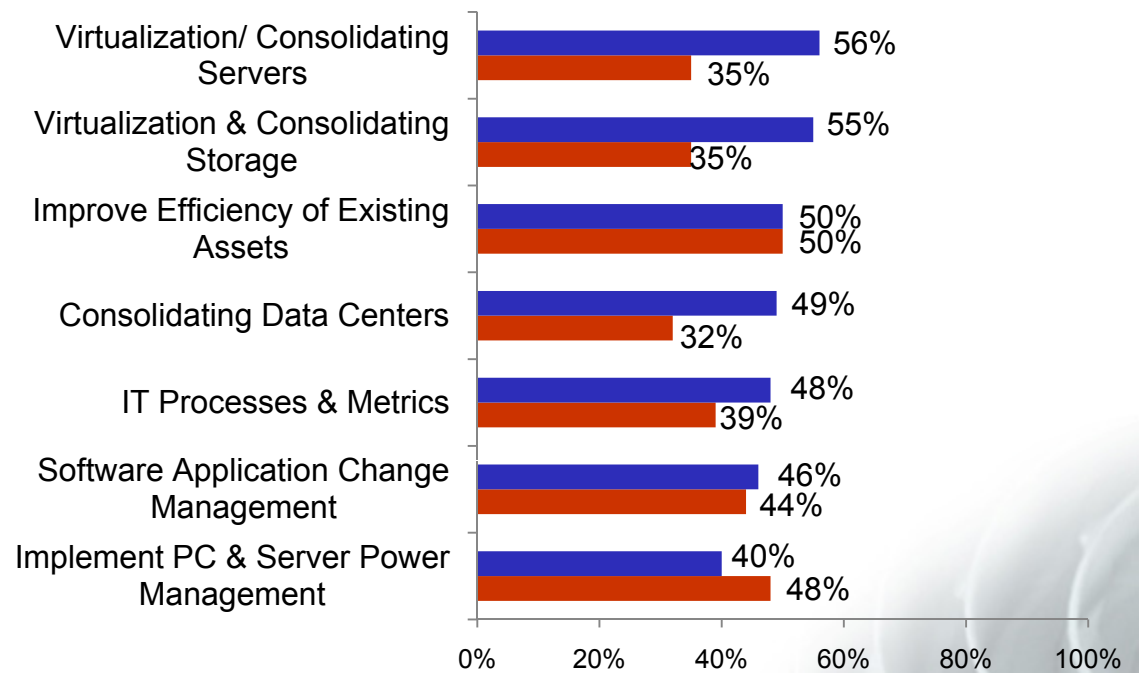
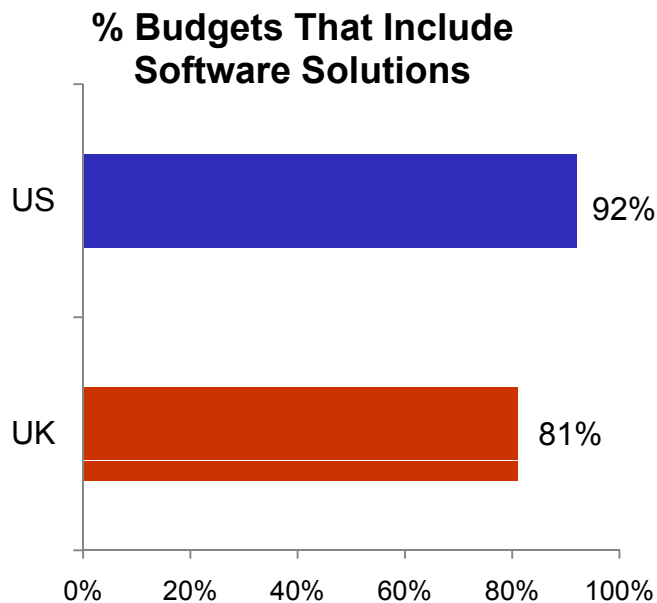


Q.10 How important are each of these changes to your IT infrastructure in proactively promoting an energy-efficient organization?

# Budgets Already Include Energy Efficient Software Solutions

Over nine-in-ten in the US and eight-in-ten in the UK have already included energy efficient software solutions in their budgets.

- US is more likely to budget for software for the virtualization and/or consolidation of servers, storage and data centers.
- UK is more likely to budget for software to implement PC and server power management.



Q.11 And which of the following changes to your IT infrastructure has your organization budgeted for?

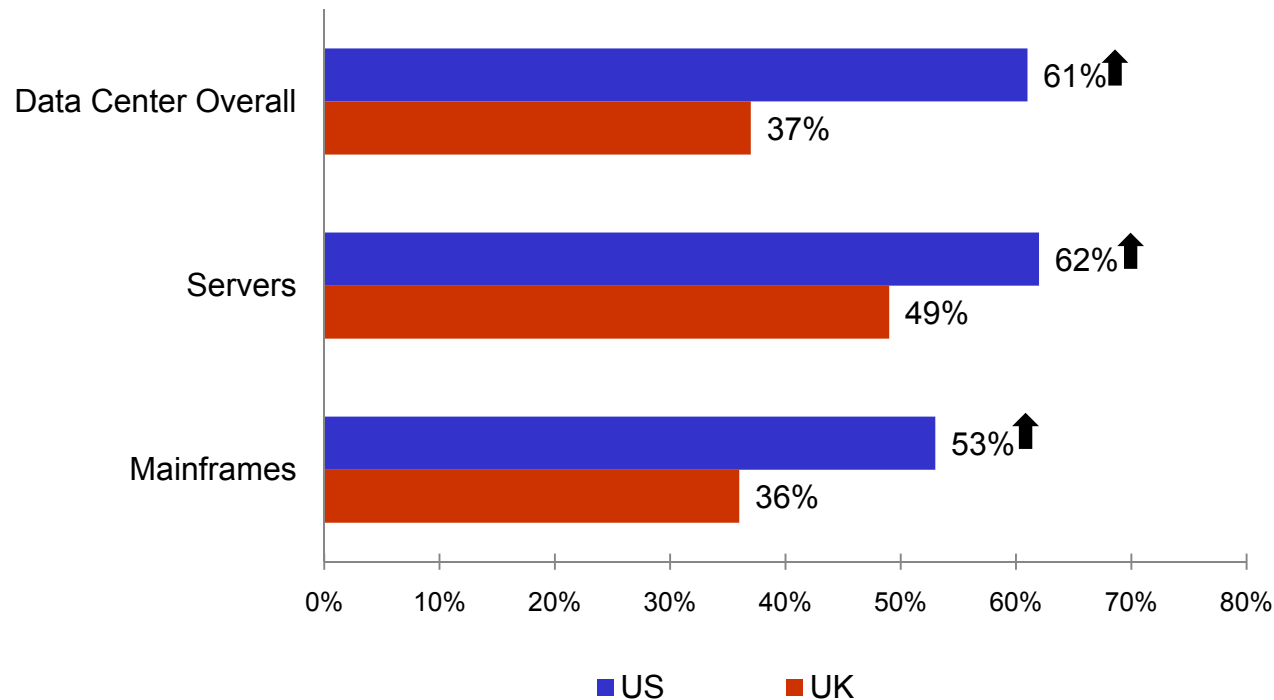
■ US ■ UK



# Energy Efficient Software Management Solutions

The application of software solutions to help manage energy efficiency is significantly higher in the US than in the UK.

- Over one-half of the IT executives surveyed in the US report that their companies are already using software to more efficiently manage servers, mainframes and data centers overall.



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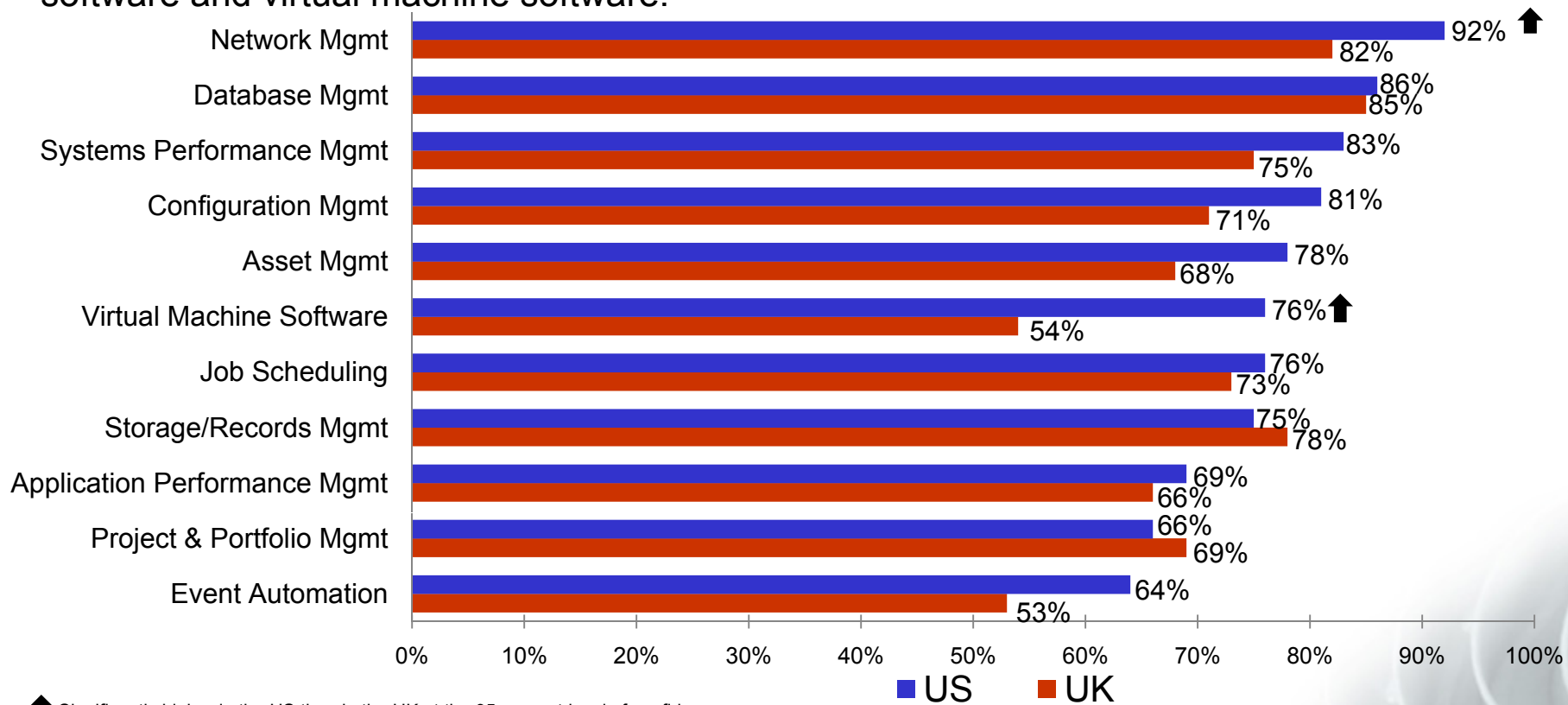
Q.14 Have you applied software solutions to help manage the energy efficiency of your (INSERT)?



# Software Solutions Currently Implemented

The majority of companies surveyed are currently using software solutions network, database, systems performance, configuration, and asset management.

- US is significantly more likely than the UK to currently be using network management software and virtual machine software.



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Q.15 Please tell me if your organization currently uses software within these categories.

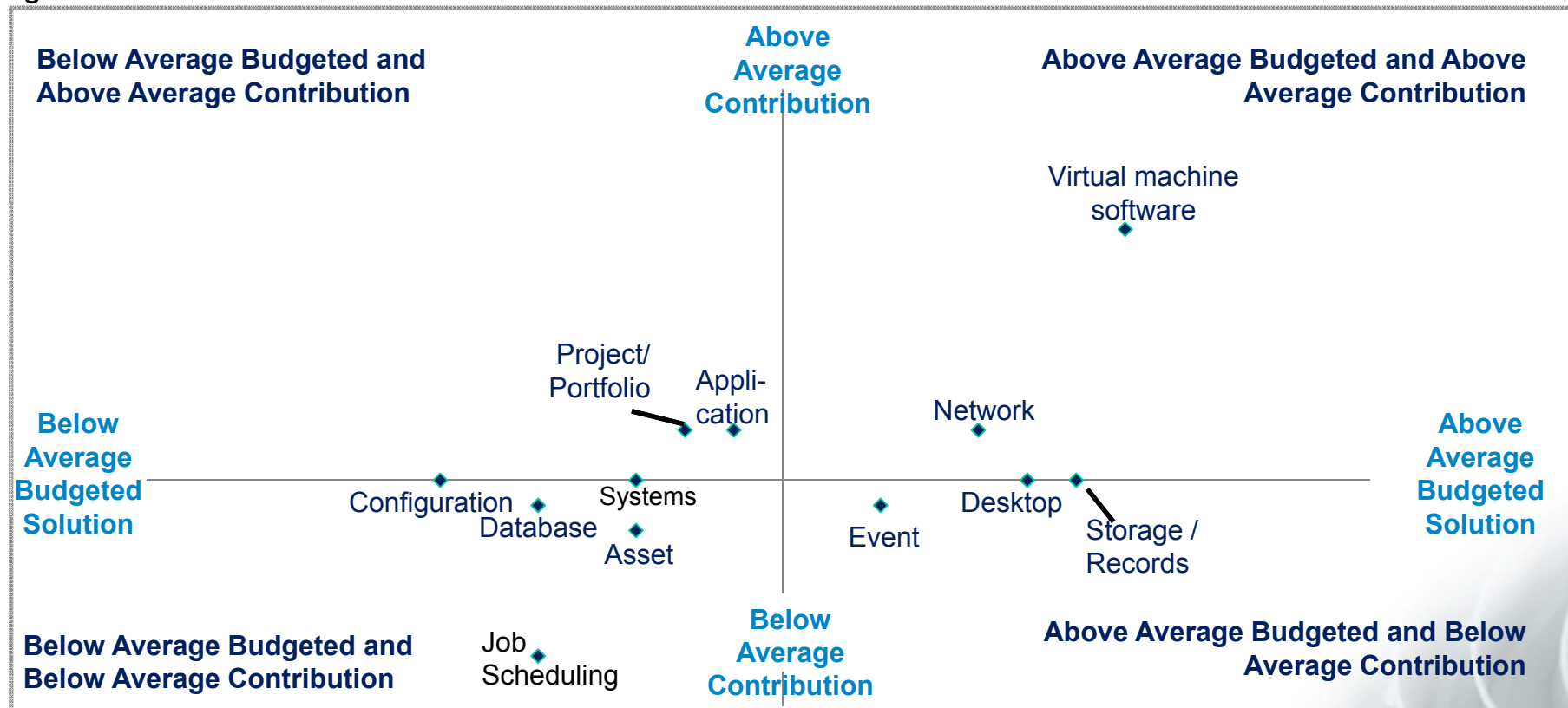


# Software Budgeted vs. Current Contribution

## United States

Of US companies using software applications, virtual machine software and network management software are the areas above average for budget and for current contribution to “green” initiatives.

Desktop management, storage and records management, and event automation are also above average for budget however, the solutions currently in place are considered at or below average for contribution to “green” initiatives.



Q.18 Which of your current software solutions are budgeted for in contributing to your “green” IT initiatives?

Q.16 How much of a contribution do your current software solutions make to your organization’s “green” initiatives?

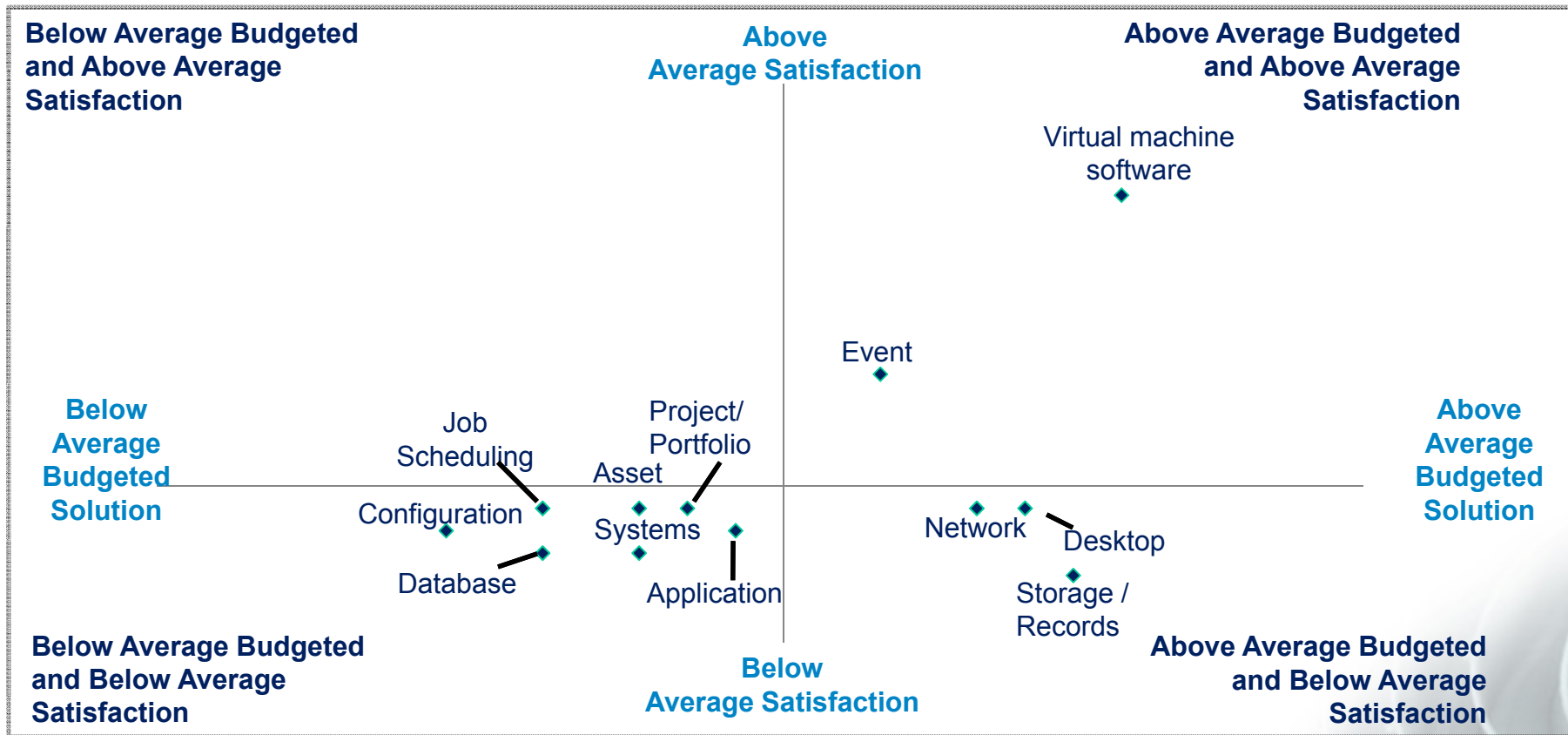


# Software Budgeted vs. Current Satisfaction

## United States

In the US, virtual machine software and event automation are above average areas for budget and IT executives are satisfied with the solution in place.

Desktop management, network management, and storage and records management are above average for budget and the solution currently being used is rated less than average for satisfaction.



Q.18 Which of your current software solutions are budgeted for in contributing to your “green” IT initiatives?

Q.17 How satisfied are you with your current software solutions contribution to your organization’s “green” initiatives?

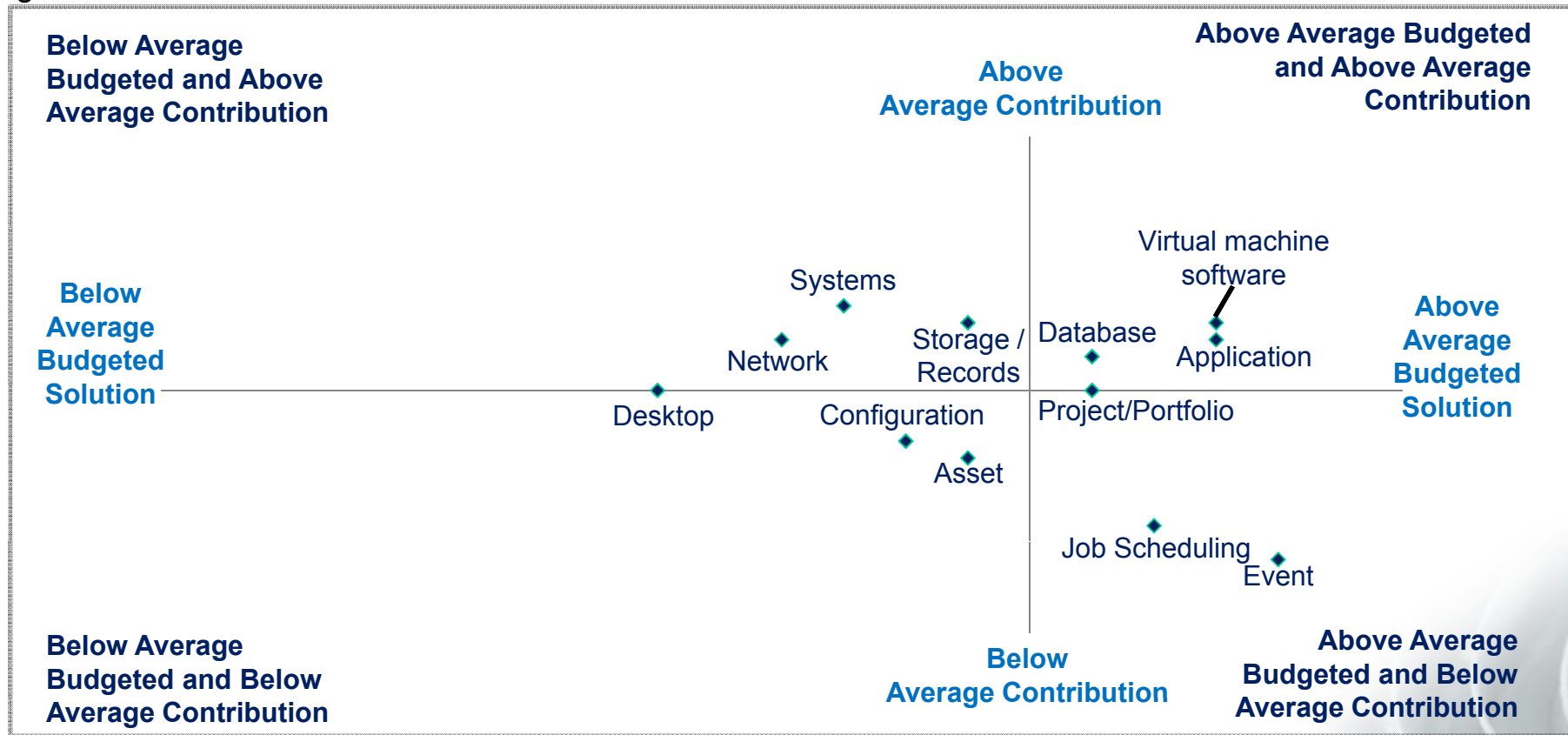


# Software Budgeted vs. Current Contribution

## United Kingdom

In the UK, virtual machine software, application performance management, and database management are the software areas above average for budget and for current contribution to “green” initiatives.

Project/portfolio management, job scheduling, and event automation are also above average for budget however, the solutions currently in place are considered at or below average for contribution to “green” initiatives.



- Q.18 Which of your current software solutions are budgeted for in contributing to your “green” IT initiatives?
- Q.16 How much of a contribution do your current software solutions make to your organization’s “green” initiatives?

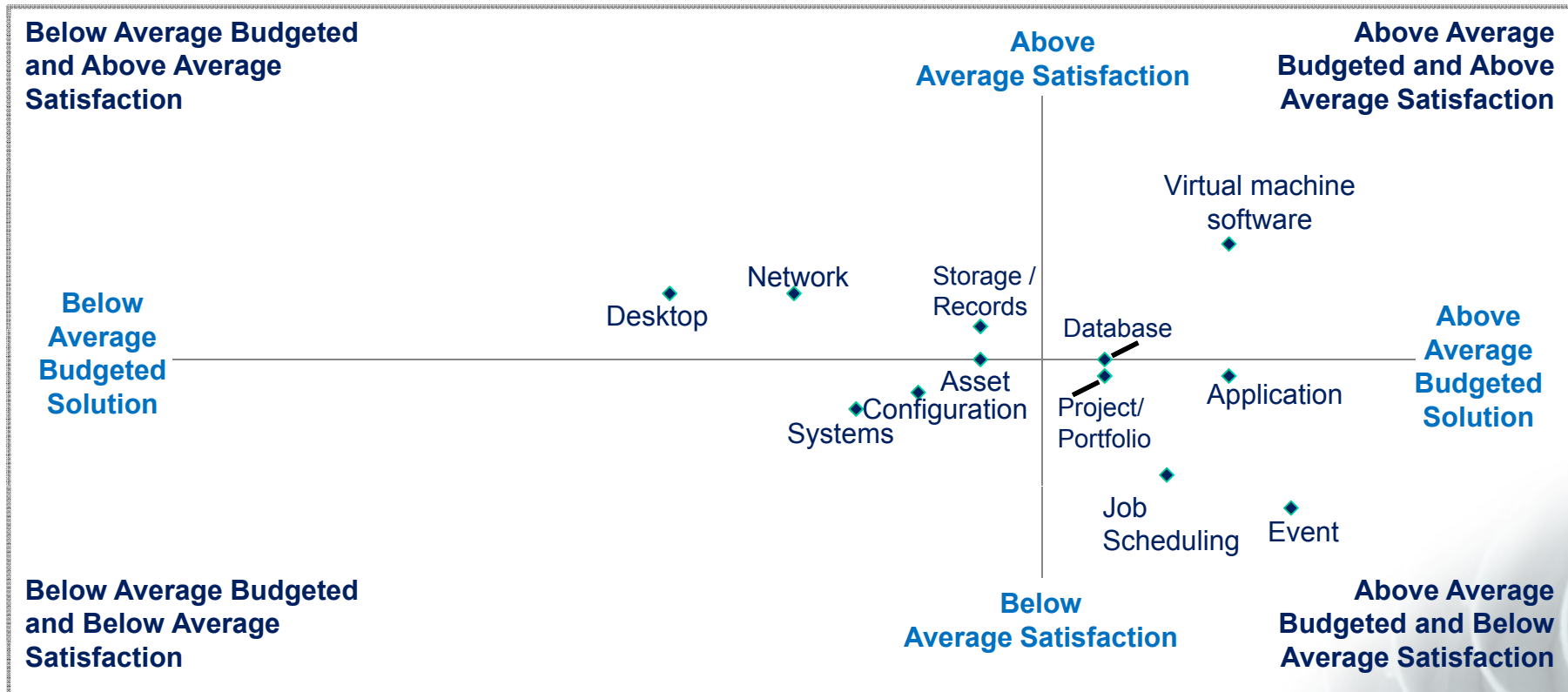


# Software Budgeted vs. Current Satisfaction

## United Kingdom

Virtual machine software is the only area that UK IT executives consider to be above average for budget and provide above average satisfaction ratings with their current software's contribution to "green" initiatives.

Database management, application performance management, project/portfolio management, job scheduling and event automation are above average areas for budget and IT executives are currently less than satisfied with the solution currently in place.



Q.18 Which of your current software solutions are budgeted for in contributing to your "green" IT initiatives?

Q.17 How satisfied are you with your current software solutions contribution to your organization's "green" initiatives?





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