Green IT – The industry requirement for a new skill set

Chris Wallace – Product Manager

Introduction

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Agenda

1. Skills for a green economy

2. Green Marketing

3. Green Skills demand - UK vs ROTW

4. IT and its role in the green economy

5. Green IT skills

6. Green IT initiatives from BCS

HM Government

Skills for a green economy

A report on the evidence

The Green Economy

- "Skills for a green economy" report published by DECC, DEFRA & BIS

- Definition of 'green economy' within report – "Value and growth are maximised across whole economy, while natural assets are managed sustainably"

- Key messages;

  – Huge, long term potential in terms of environmental stability and financial growth

  – Must ensure workforce has the right skills that business is in a strong position to take advantage of these opportunities.

  – Increased efficiency can increase profits and competitiveness, making UK industries stronger and more resilient.

"The payback on investment in green skills may mean improved product or service quality, increased productivity or a range of bottom line financial performance measures. For example, research has identified some £22bn a year of potential savings to UK businesses from using raw materials, energy and water more effectively, in ways needing no or small scale investment. The payback to businesses would be achieved within only one year, but the workforce needs the capability to deliver these changes. Insufficient information and behavioural and motivational factors are commonly cited as barriers to realising this potential."

(BIS, Green Light? A review of regulatory barriers to small businesses' resource and energy efficiency. 2010)

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A business that is Carbon positive, wastes nothing, restores the natural environment and improves peoples lives

M&S – Plan A Report

International……are already being trained

- APAC already aware of the economic benefits and are skilling their workforce

    - Governments in Japan, Hong Kong, Singapore etc, are financing the cost of training through various sponsorships/tax exemptions

- South America – Another financial perspective however, more of a cost management as opposed to revenue generation

- UK – too rich to care ?

    - "Organisations do not have the right level of awareness or understanding of their green skills requirements of the green economy" [1]

    - "There is evidence of demand for a light green workforce with more generic green skills across firms and sectors that will give businesses a competitive edge" [2]

    - "There is also evidence of demand for classic leadership skills that will help to drive green transformation throughout organisations" [3]

[1] [2] [3] "Skills for a green economy" A report on the evidence 2011

Where does IT fit in?

IT Accounts for 2% of the worlds global emissions, but IT can enable reductions in the other 98% of emissions – *Gartner 2007*

Green IT Innovation

Economic savings

Environmental Savings

IT Impact
In Use & Embedded Energy

Overall IT Impact

Carbon Efficiency

Delivered Value

Business Process / Revenue?

$ / kg CO_2 ?

IT Mitigation
Reduced energy use, Travel, logistics, forecasting

Conclusions

- The industry has its own footprint to address

- As an industry we must learn to champion ourselves as the potential answer

- IT function becomes a much bigger component in decision making?

- Opportunity for IT professionals to distinguish themselves in the short term

  - A capable IT professional with green skills will soon realise the benefits of these skills over and above others.

  - Industry looking for leaders to further the green agenda.

- IT professionals who skill themselves in delivering green solutions later on, will miss the opportunity to get the jobs that will emerge as this area grows.

What skills are required?

There are key areas where new and more green orientated skills are crucial…

Strategy –

- Developing a sustainability strategy for their IT activity in preparation for regulation and enabling financial benefits
- Policy and planning, leading to tactical activity

Assessment –

- The impact of current & future IT operations
- The amount of energy being drawn v the amount of energy being utilised by IT activity
- Impact on any change to consumption or IT working processes/practices
- Monitoring processes to be used to avoid large fines.

Management -

- Process improvement plans for sustainability
- Accounting
- Disposal across the complete IT estate
- Change management
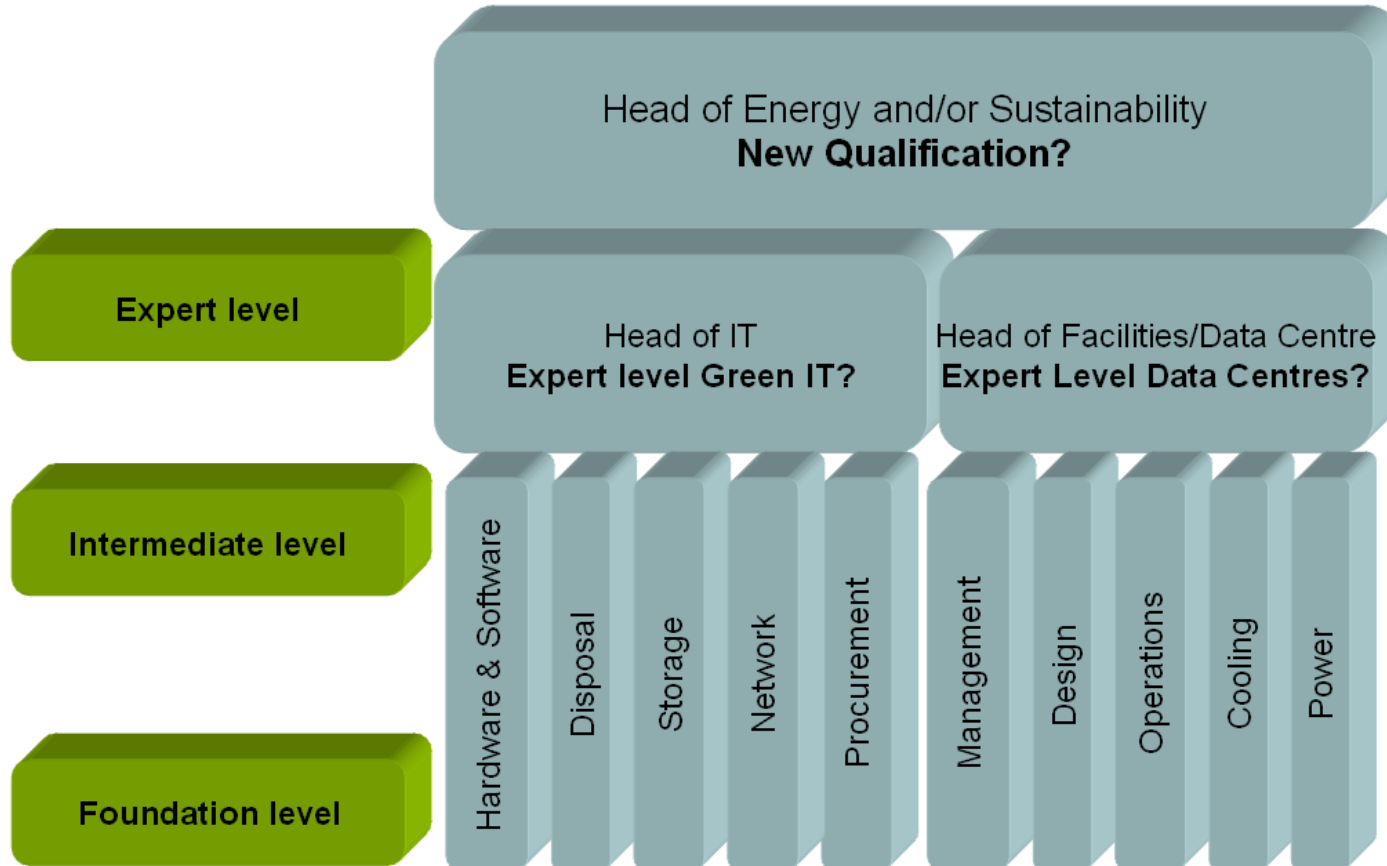- Asset control
- Energy supply

How do I find this person?

Within your organisation

- Someone who has an interest in carbon management and efficiencies

- Someone with proven skills at applying industry best practice

- Someone who has credibility and confidence within the organisation to make significant changes

- Understanding of how to attribute carbon/energy to £'s

- An appreciation for the facility and IT functions

- Someone who has certified their knowledge

Externally

- A track record of Green/Sustainable projects

- Certified their knowledge/Qualified

Who is this person?

Head of Energy and/or Sustainability
New Qualification?

Expert level

Head of IT
Expert level Green IT?

Head of Facilities/Data Centre
Expert Level Data Centres?

Intermediate level

Foundation level

Hardware & Software

Disposal

Storage

Network

Procurement

Management
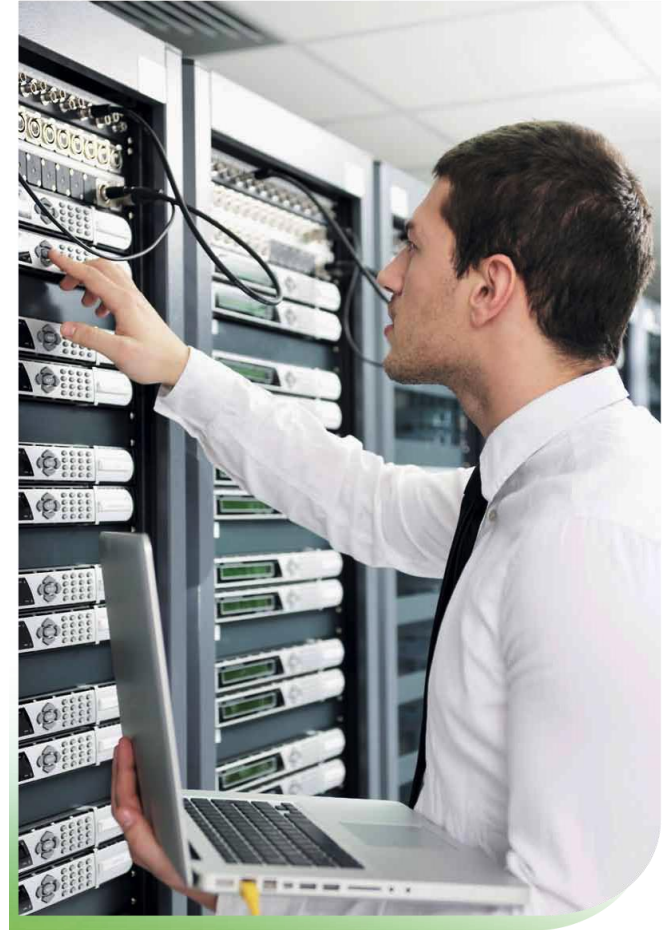
Design

Operations

Cooling

Power

This model has been based on work done by The Green Grid and modified to reflect infrastructure against certification levels. The original model can be found in a presentation called; 'Plotting a path to sustainability with The Green Grid's Data Centre Maturity model. http://www.thegreengrid.org/Global/Content/Tools/DataCenterMaturityModel.aspx

How is BCS enabling this change?

- **As the leading professional body for IT practitioners around the world, BCS, The Chartered Institute for IT, recognises the industry's fundamental need to address the environmental impact of IT.**

- Legislation is already starting to tighten business practices that are being underpinned by international treaties and national regulations. It is time for IT professionals and organisations to equip themselves with the knowledge and skills to deliver energy efficient and sustainable IT.

- BCS is proud to provide the profession with a range of initiatives that will enable individuals and organisations to significantly contribute to creating low carbon and energy efficiency outputs.
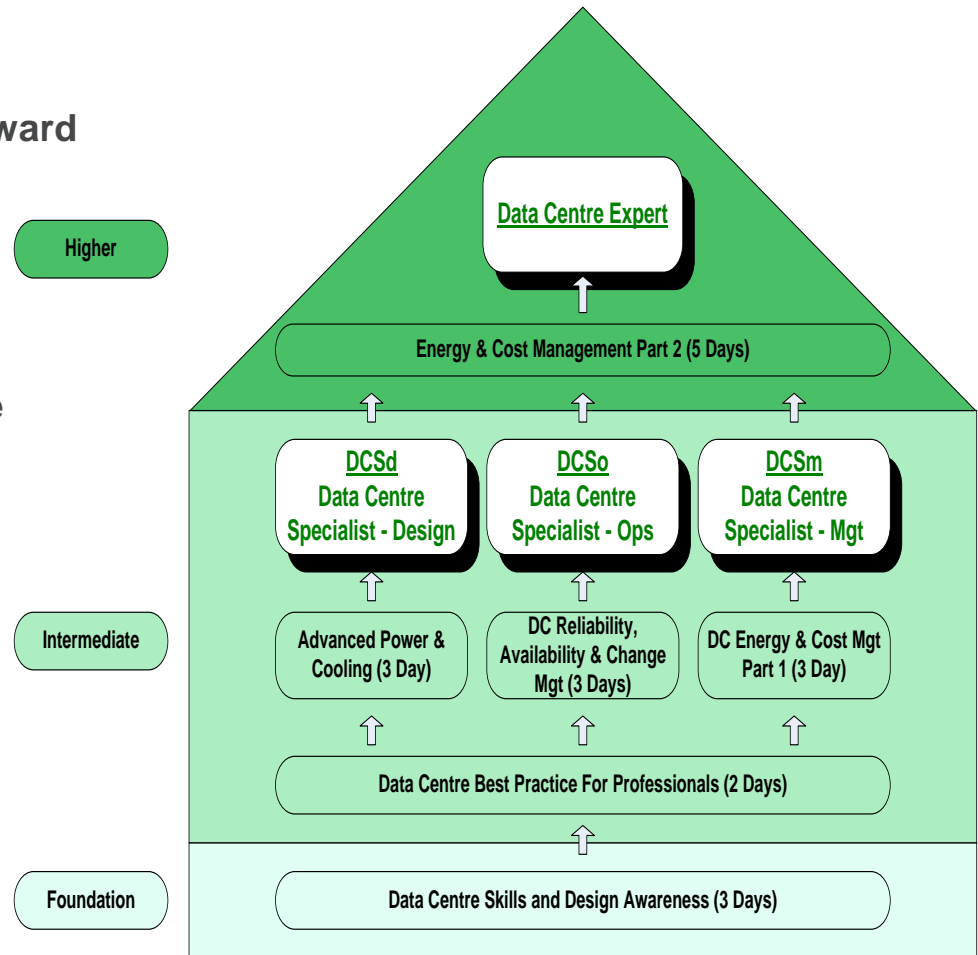

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How is BCS enabling this change?

Product Portfolio:

- **Certified Energy Efficiency Datacentre Award (CEEDA)**
- **Green IT Foundation Certificate**
- **European Code of Conduct Intermediate Certificate**
- **Energy & Cost Management Intermediate Certificate**
- **Publications**

Related Specialist Groups:

- **Green IT Specialist Group**
- **Data Centre Specialist Group**
- **Carbon Footprint Working Group**

Higher

Intermediate

Foundation

Data Centre Expert

Energy & Cost Management Part 2 (5 Days)

DCSd
Data Centre Specialist - Design

DCSo
Data Centre Specialist - Ops

DCSm
Data Centre Specialist - Mgt

Advanced Power & Cooling (3 Day)

DC Reliability, Availability & Change Mgt (3 Days)

DC Energy & Cost Mgt Part 1 (3 Day)

Data Centre Best Practice For Professionals (2 Days)

Data Centre Skills and Design Awareness (3 Days)

Working towards a career in Sustainable & Energy Efficient IT

Sustainability & Energy Efficiency expert

Energy & Cost Management for Data Centres

EU Code of Conduct for Data Centres

Intermediate

Carbon Measurement & Analysis in IT (*Coming 2012*)

Data Centre Design Foundation (*Coming 2012*)

Foundation

Green IT Foundation Certificate

Certified Energy Efficient Data centre Award

- Demand for industry independent certification and award program

- Evidence based on-site verification of best practice

- Independently audited at all stages

- Based on industry best practice

- Strong links with other industry stakeholders
  - **European Commission Code of Conduct**
  - **The Green Grid**
  - **The Japanese GreenIT Promotion Council**
  - **US DoE / EPA**

The CEEDA programme is separate from the EU CoC process. Accordingly, Participant or Endorser status in the Code of Conduct will not receive recognition within CEEDA and similarly, achieving an Award will not guarantee Participant or Endorser status in the Code of Conduct.

Summary

- IT cannot remove itself from the implications or the environmental impact of its activity.

- IT professionals should gain skills and competencies to enable them to fit into an evolving corporate culture that will require sustainability experts.

- BCS is building a portfolio of products and services that enable our industry to be more energy and cost efficient

- Skills should be seen as complementary to BAU, not optional

Thank You……

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